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Address.

RECENT PROGRESS IN LARYNGOLOGY, OTOLOGY AND RHINOLOGY.

CHAIRMAN'S ADDRESS, DELIVERED BEFORE THE SECTION ON LARYNGOLOGY AND OTOLOGY, AT THE FIFTY-THIRD ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, AT SARATOGA SPRINGS, N. Y., JUNE 10-13, 1902.

G. HUDSON MAKUEN, M.D.

PHILADELPHIA.

A NEW NAME SUGGESTED FOR THE SECTION.

We live in an age of specialism. No man, however ambitious, can any more hope to know all there is to know in medicine. The practitioner of to-day who would even approximate accuracy in his work, must perforce choose his specialty. Nor, indeed, is specialism a new thing, for, as Dr. Jonathan Wright of Brooklyn has pointed out in his recent interesting papers, there are evidences in literature of its having been practiced by the Egyptians more than fifteen hundred years before the Christian era. While these ancient writings contain no direct reference to laryngology and otology, it is interesting to note that Herodotus mentions "diseases of the head" among the specialities of Egyptian medicine. Thus may we not infer that the newest of our triad, rhinology, may be in fact the oldest and the first to be recognized as worthy of special practice. This being so, are we not somewhat neglectful of our sister specialty in denying her a place in the title of our Section. Making use, therefore, of one of the prerogatives of my position as your chairman, I would suggest that we adopt such measures as may be necessary to have our name changed so that it will read: The Section of Laryngology, Otology and Rhinology of the American Medical Association.

Whatever may have been the status of our specialty in ancient times it now ranks among the first of the specialties in medicine. While diseases of the throat, ear and nose have been recognized for centuries, it has remained for the modern laryngologist, otologist and rhinologist to develop a working classification of these diseases and a rational system of treatment. Indeed, laryngology, otology and rhinology, as we know and practice them to-day, may be said to have had their origin within the memory of us all. Their development and growth have been marvelously rapid and each succeeding year has witnessed important steps in advance. Other and abler men have written their early history, and it is of their more recent progress that I shall have the honor briefly to speak.

THE LARYNX AND ITS DISEASES.

Excellent work has been done in laryngology, although attention has been directed chiefly to the parts above the larynx. Dr. George Avellis of Frankfort-on-Main, who has made some investigations with reference to the singing organs of birds, claims that the larynges of the birds possessing beautiful voices do not differ widely from those not so gifted. He also claims that the laryngoscope reveals no peculiar conformation in the larynges of singers, and that the power to sing depends, not so much on the structure of the larynx as on the mental and intellectual bent of the individual.

Dr. Allen T. Haight, Chicago, describes a new aseptic throat mirror made from solid German silver highly polished and nickel plated. It has a universal handle made of steel and the connection is by ball and socket joint, to allow of easy adjustment to any position or angle. It may be sterilized by boiling.

Laryngectomy is no longer the unusual and dangerous operation it once was, and its results, largely perhaps on account of improved technic, are much more satisfactory, both to the patient and to the operator. Dr. D. Bryson Delavan and others are making some investigations relative to the value of the *x*-ray in the treatment of malignant tumors of the larynx. Tubercular laryngitis and its treatment still play a prominent part in the discussions of our meetings, and opinions are divided as to the frequency, and even the possibility, of primary tuberculosis of the larynx and as to the efficacy of radical surgical measures for its cure. Eruptions and ulcerations due to the use of orthoform have been reported by W. Dubreuilh.

Dr. S. Leduce of Nantes has invented a glass tube for the inspiration of remedial powers by which it is said the patient may make the necessary applications to his own throat.

DIPHTHERIA.

Antitoxin has added a new interest to the study of diphtheria. E. von Behring asserts in his book just published in Berlin that inasmuch as the Klebs-Löffler bacillus may be found in the throats of about 10 per cent. of the entire population it must in many cases either be of a non-virulent type or else some individuals are immune to its infection. The comparative immunity of physicians to the disease he ascribes to the unconscious auto-inoculation of the virus in small doses, and he suggests a more general immunity, and the final disappearance of the disease altogether, by the use of antitoxin inoculations. Should these views prove to be correct, the future treatment of diphtheria will consist largely in its prevention, not as at present by the isolation of those having been exposed to the disease, but by removing the natural predisposition to infection with antitoxin injections.

Dr. J. W. Steele, in some late statistics on the use of diphtheria antitoxin, has shown that the former death rate of 65 per cent. has been reduced to 16 per cent.,

and Dr. H. G. Jump reports excellent results from the inoculation of every child exposed to diphtheria with from 250 to 500 units of the antitoxin.

Some one has pointed out the fact that the virulence of the Klebs-Löffler bacillus is not a constant factor but has its periods of fluctuation, and that we may now be passing through a period in which the disease manifests itself in a mild form, and therefore antitoxin may not possess all the virtues that have been claimed for it. Of course, time alone can determine this point.

INTUBATION.

Dr. I. Dioniato, Turin, has introduced perforated intubation tubes in which he claims that the danger of sudden obstruction is almost entirely obviated by the circulation of the air through the perforations above the point of occlusion, and in 33 cases reported expulsion of the tube in only one case, whereas without perforation it occurred in about 18 per cent. of cases.

Dr. E. Collette of Anvers, Antwerp, reports the successful removal of intubation tubes with the electromagnet. The operation is easily performed, instantaneous and specially serviceable in cases of impending danger due to sudden obstruction of the tube.

Dr. Rudolph Matas of New Orleans has devised a graduated air pump for artificial respiration by direct laryngeal intubation with a modified O'Dwyer tube.

Dr. F. Kuhn of Leipsic has devised a flexible oral intubation tube which extends from the larynx out through the mouth. It is indicated during narcosis for operations on the upper air passages. It is said to prevent the aspiration of all secretions, and to make it possible to thoroughly pack the nasal and oral passages without interfering with the breathing. In cases of asphyxiation the air may be blown through the tube into the lungs.

ANESTHETICS.

Dr. H. P. Moser describes an apparatus for administering anesthetics, in operations on the respiratory tract, in which ether is forced through a tube by means of a bellows, the tube being held sufficiently far away from the mouth and nose of the patient to allow the operator to work unhampered by the administration and the patient is kept in a sitting posture.

Dr. William A. Briggs advises the mentholization of the mucosa of the air passages before, during and after etherization, and claims the following advantages: 1. Entire freedom from cough and the sense of impending suffocation, and comparative freedom from nausea, vomiting and retching. 2. The rapidity with which anesthesia may be induced and the ease and smoothness with which it may be maintained. 3. The entire absence or marked abbreviation of the period of excitement. 4. Economy both of ether and of time. 5. Profounder first anesthesia, under which minor operations may be done with more certainty. 6. Probably less post-operative nausea and vomiting.

Dr. George W. Crile has made some further investigations relative to the use of local applications of a weak solution of cocain and eucain in operations about the pharynx and larynx, and he claims that they prevent reflex respiratory inhibition, and that cardiac inhibition may be overcome by the hypodermic injections of atropin.

FOREIGN BODIES.

Dr. Roaldes has reported the results of special study of the technic of removing metallic foreign bodies from the air passages by means of a magnet. He is convinced that improvement of the technic would make it possible to remove such foreign bodies from the bronchus through the mouth by means of the combined use of a strong magnet and fluoroscopy and bronchoscopy.

Dr. A. Coolidge, Jr., Boston, speaks of the ease with which foreign bodies may be removed from the trachea and bronchi through a straight tube placed in a previously made tracheal opening, artificial light being reflected into the tube from a head mirror. This would seem to be a decided improvement over the old method of hunting blindly for such bodies. Dr. J. A. Killien reports the removal of a fishbone 22 mm. long from the left bronchus of a child three and a half years old, under control of the eye by means of bronchoscopy without injury to the tissues.

LOCAL ANESTHETICS.

Dr. Chas. A. Elsburg reports some cases illustrating the value of adrenalin chlorid, in the proportion of 1 to 5,000 to 1 to 20,000 solution, in conjunction with a sterile solution of eucain, cocain or Schleich's mixture for local anesthetics in minor surgical operations, to do away with the oozing of blood from the wound, and he claims that inasmuch as adrenalin is a cardiac stimulant it has the additional advantage of counteracting the depressing effect of either cocain or eucain, and it prevents congestion and pain after the anesthetic effects have worn off. A new local anesthetic, aconin, has been described before the French Academy of Medicine by Dr. Chauvel, and he claims that it is not toxic. Herter and Richards have shown that injections of adrenalin solution into the abdominal cavity of dogs has invariably produced well-marked glycosuria, and that 1 c.c. of adrenalin solution (1-1000 c.c. of water) applied to the surface of the pancreas was followed within ten minutes by the appearance of sugar in the urine.

WHOOPING COUGH AND ANGINA.

Dr. de Lamalleree reports remarkable results from the treatment of whooping cough with the inhalation of formic acid vapors.

Dr. William Cheatum, who has made a special study of the relation of angina to rheumatism, concludes that although the two diseases have many etiologic points in common their connection, although undoubted, is in many cases not yet clearly established.

Dr. Emil Mayer has been the first in this country to report a case of ulcerative angina in which was found the fusiform bacillus and the spirillum of Vincent. The difficulties and importance of making a differential diagnosis between this ulceration and chancre of the tonsil were clearly demonstrated.

THE TONSILS AND TONSILLOTOMY.

The function of the tonsil, and the indications for operative measures on the lymphadenoid tissue composing "Waldeyer's ring," still furnish a wide field for discussion. Opinions vary all the way from that of Bosworth, who stated some twenty years ago that practically there is no tonsil in the healthy throat, and who still is inclined to adhere to this view, to the opinion of those who claim that it is a normal physiologic structure with well-defined functions and that it should not be subjected to surgical interference except on evidences of the development of well-marked pathologic conditions. A careful review of the literature would seem to indicate that the latter is the more widely accepted view and that a wholesale removal of this tissue in the absence of any pathologic indications is not to be recommended.

That the complete removal of faucial tonsils may prove to be at least a temporary detriment to the voice has been shown in several cases coming under my own observation, and Dr. H. Lambert Lack of London claims that loss of the singing voice often follows the operation. I am convinced, however, that this is only a temporary loss due to the new condition in the pharynx, and that a little careful practice will always restore the voice and in those cases in which the operation has been well advised and skilfully executed there will be given to the voice additional beauty and power.

The various operations for the removal of the tonsil are beginning to be regarded with more and more trepidation on account of the danger of hemorrhage, both primary and secondary. Our present fear of accident is by no means a new thing, for the celebrated Italian surgeon, Fabricius, after describing the operation for tonsillotomy as performed by Celsus and Paulus Ægineta, says: "Wherefore we may gather that it is not entirely safe or easy to carry out the operation." "Consequently," to quote from Dr. Jonathan Wright, "he advises seizing the tonsil with a long forceps and drawing it out so that by skilfully making traction the tonsil as of its own accord will follow." Not many of us, I think, would be willing to submit our own throats to such a procedure or attempt to practice it on others. Damianos states that there are on record about 150 cases of severe hemorrhage following tonsillotomy, and that 7 of them proved fatal. He adds to the list another fatal case in which the incision passed through the plane of the outer capsule of the tonsil and divided the tonsillar arteries, which failed to contract or retract. He advises against the complete ablation of the tonsil on account of the danger from this source.

Dr. H. A. Leipziger also protests against regarding tonsillotomy as a minor operation, and thinks it should always be done in a well-appointed hospital, where ample opportunities exist for the control of hemorrhage. He is of the opinion that this accident is due to vasomotor influences which may be excluded by syncope or unconsciousness, and this he obtains by hypodermics of morphia. Secondary hemorrhages following tonsillotomy have also been reported by Drs. Homer M. Thomas, Henry Gradle, Otto T. Freer, W. L. Ballenger, N. H. Pierce, W. M. Casselberry, Lee Weber, Dunbar Roy and S. J. Knapp.

Dr. W. W. Keen, in reporting two cases of ligation of the external carotid artery for severe hemorrhage following slight operations in the pharynx and nose, takes occasion to emphasize the simplicity and effectiveness of the operation. It takes but a few minutes and it probably saved the lives of the two cases described. It would seem to follow that every throat and nose surgeon should be prepared to do this slight operation.

Dr. Crile has tried the experiment of temporarily clamping the carotid arteries in 19 dogs to prevent hemorrhage in operations about the head and neck. He also reports 18 clinical cases ranging in age from 7 months to 79 years in which this method was used with satisfactory results.

ADENOIDS.

The drift of opinion is more and more toward the early and complete removal of hypertrophied pharyngeal tonsils. Drs. E. J. Moure and Lafarelle, Bordeaux, France, have recorded the results of their examinations of 60 anatomic sections of the nasopharynx and the clinical study of 92 cases of adenoids, showing a great diversity in shape and size of this cavity and the impossibility of operating successfully in this region with instruments of fixed size and shape. They claim that digital examination should be made in all operative cases to ascertain whether the shape is, 1, arched; 2, contracted; 3, irregular with a recess; these being the varieties illustrated by cuts from actual preparations.

Dr. O. Stewart reports the removal of an adenoid mass measuring three-eighths of an inch in length by three-quarters of an inch in depth, from a child eleven days old, with immediate relief of the symptoms which were snoring and inability to nurse.

That there are still those who think that the removal of adenoids by operative measures is not necessary is indicated by the fact that Lapeyre reports the rapid disappearance of adenoid symptoms in twenty-eight cases by the internal administration of the tincture of iodin, in doses varying from 16 to 18 m. per day, in patients ranging from 5 to 9 years of age.

CLEFT PALATE.

Dr. G. V. I. Brown, in operating for cleft palate and harelip, advises approximation of the sides of the bony cleft by means of an apparatus for drawing the lateral halves of the superior maxillary bone toward each other and holding them there for some time prior to the operation for complete closure of the cleft. He also mentions a point to which your chairman has repeatedly referred, namely, that unless the operation is done early in the life of the patient the faculty of speech is not much improved, and that a complete change in the methods of articulation must be established by means of suitable mental and physical training.

W. Arbuthnot Lane, an English surgeon, recommends that the cleft be closed in the fourth or fifth week, and he mentions among the advantages of the early operation the fact that, the vessels being small, only a trifling amount of blood is lost, whereas in older persons the bleeding is often profuse. His method of operation when the cleft is large is to raise a flap of the mucous membrane and periosteum from one side and turning it over to suture it to the freshened margin of the other side, and he recommends the ligation of the palatine vessels to avoid hemorrhage.

Dr. George A. Raymond, a dental surgeon, asserts that the use of mechanical appliances is the best means for giving anything like perfect speech in cases of cleft palate, and this is probably true, unless the operation be done in the early weeks of childhood.

PARAFFIN INJECTIONS.

The saddle-back nose has received considerable attention during the year. Dr. F. W. Gwyer remedies this condition by means of a flap taken from the tip of the nose, and he renders the broadened alæ more shapely by removing a portion of the cartilage on either side. The operation that has attracted special attention, however, is the one devised by Gersuny. It consists in the subcutaneous injection of paraffin, and he has reported 40 cases successfully treated by this method. Broeckaert reports two successful cases of sunken nose greatly improved by Eckstein's method, which differs from that of Gersuny only in that the paraffin is of a higher melting point. He claims that the result is perfect, and that the operation will replace many of the tedious and delicate operations of plastic surgery. Dr. Scanes Spicer exhibited before the London Laryngological Society an interesting case successfully treated thus. Drs. Harmon Smith and F. J. Quinlan of New York City also report excellent results in many cases. Mr. R. Lake exhibited before the London Laryngological Society a case in which he injected paraffin into the inferior tur-

binate bodies for the relief of atrophic rhinitis, and the patient claimed to have experienced marked relief from all the symptoms.

Dr. John O. Roe has shown photographs of a patient kicked by a horse. The tip of the nose and the cartilaginous portion of the septum was torn away, and most excellent results were obtained by means of plastic surgery, using the inner portion of a thick upper lip.

Dr. John W. Murphy has exhibited some sections of a head previously hardened in a 3 per cent. solution of formaldehyd. The process of hardening continued over a period of three years, during which time the solution was changed every three months. Judging from the photographs of the plates the results were most satisfactory.

As a preliminary to intranasal operations Ostmann of Marbury recommends the obliteration of the blood vessels of the nose.

Dr. S. S. Bishop reports the removal of a rhinolith weighing seventy-one grains. On account of its great size he was obliged to take it away in sections after crushing it with powerful forceps. J. M. Ingersol of Cleveland reports the removal of a rhinolith weighing two drams. It was also removed in sections, and in one piece was found a bean which the patient recalled having put in his nose when a small boy about thirty years before.

Dr James Sawyer recommends a powdered desiccated suprarenal gland in the treatment of hay fever. Full pathologic effect has been obtained, and the drug is used for this purpose both locally and internally. Fink reports the apparent cure of eleven cases of hay fever by the insufflation of aristol into the maxillary antrum.

OPERATIONS ON THE SEPTUM AND TURBINATES.

Dr. Chas. H. Baker of Michigan reviews six so-called indications for the removal of the middle turbinal bone, and Chevalier Jackson regards the inferior turbinal of the concave side of the nostril as a frequent cause of deflection of the septum and recommends its removal at the time of operations of septal deflections. Dr. Walter J. Freeman has published an excellent thesis on the nasal septum.

Dr. Otto T. Freer describes the correction of septal deflections, after the manner of Krieg and Baenninghans, by the dissection of the deflected portion of the cartilage with no untoward results, such as tilting or falling in of the nose, and your speaker reports excellent results in the removal of the anterior two-thirds of the cartilaginous portion of the septum which was dislocated and projecting through the vestibule, presenting a somewhat unsightly appearance. Although a slight perforation was made in the mucous membrane of the opposite side during the dissection, it promptly healed and there is now scarcely any evidences of the operation. That this method will take the place of the Asch operation to any great extent is extremely doubtful. Dr. D. Braden Kyle has described some improvement on his own operation for correcting septal deflections by means of V-shaped incisions.

Flatau reports the cure of two cases of atrophic rhinitis by the implantation of a row of ivory pegs at the point of insertion of the inferior turbinated bone and that the operation under cocain was a very simple one.

Thomas H. Halsted of Syracuse, N. Y., reports a case of sudden blindness from empyema of the right maxillary and the ethmoidal and sphenoidal sinuses.

Not many of us will follow the example of Furet, who has gone through a healthy maxillary sinus for the purpose of trephining the sphenoidal sinuses. Bryan, Jansen and Luc have reported similar operations on the sphenoidal sinuses, but only when the maxillary sinus was also diseased. Furet claims that we are justified in doing this operation in all cases of sphenoidal sinusitis complicated with cerebral symptoms, and also in cases occurring of persons with narrow or malformed nasal fossæ.

THE ROENTGEN RAYS.

Mr. Lawrence of London reports a case of improvement of that rare condition, tubercular rhinitis, by the application of the Röntgen rays, a treatment which has proved to be of value in cases of lupus of the skin, and Mr. de Santi two cases of lupus of the interior of the nose, one treated by the Röntgen rays and the other by the internal administration of urea, ten grains to the ounce of water, combined with local curettage and lactic acid applications.

The *x*-ray has also been used by Dr. John H. Phillip to determine the location and size of the frontal sinuses, and the importance of this procedure is well illustrated by a case reported by Dr. Jonathan Wright, in which, the frontal sinus being absent, the frontal bone was perforated and the dura mater wounded with disastrous results. Dr. M. H. Cryer also speaks of a postmortem case in which the brain substance extended into the sinus and was partially removed before the nature of it was known. Drs. Chas. K. Mills and G. E. Pfahler reported some cases of clinical localization of brain tumors by the Röntgen rays.

Dr. Victor Alsen reports five cures of chronic empyema of the maxillary antrum by an operation through the canine fossa, which is intended to bring about a complete obliteration of the antrum by cicatricial tissue, and he claims that it is the only operation hitherto devised for the disease that can in any sense be called radical.

Dr. L. H. Pegler exhibited before the Laryngological Society of London a woman, aged 23, who was unable to breathe through her nose, although the passages were unobstructed, and who had a defective speech known as rhinolalia clausa. A large pad of adenoids and turbinal hypertrophies on both sides had been removed, leaving the nasal chambers entirely free, but after the operation the symptoms grew worse instead of better. It was regarded as a case of hysterical incoördination of the muscles of the soft palate and pharynx. A course of physical and mental training such as is used in hysterical aphonia would give, doubtless, the desired relief. Dr. Dundas Grant also reports a similar case, in which he considered the trouble to be due to anesthesia of the nasal mucous membrane. The patient could not feel the air and therefore thought she could breathe only through the mouth. This is probably the explanation of many cases of subjective obstruction.

DIAGNOSIS AND TREATMENT OF DEAFNESS.

Marage has invented an instrument for testing the hearing and massaging the drum membrane by means of the fundamental vibrations of the vowel sounds. As a therapeutic measure he claims for this practice marvelous results. Hearing was restored to normal in several cases of extreme deafness, and successful results in many cases of sclerotic otitis in which all other methods had failed. The special value of the procedure consists in the fact that the vibrations received by the ear drum approximate the normal vibrations of speech, and they serve the double purpose of massaging the ear drum and educating the auditory speech centers.

Dr. B. A. Randall emphasizes the value of binaural hearing, and thinks that because a person's ears may be engaged in hearing each a different thing from the other at one and the same time it is important that both should be kept in normal condition.

E. Amberg has invented an acumeter in which a steel ball of given weight falls on a metal plate. Great precision is claimed for the instrument, and examination of different patients by different physicians can be compared.

The use of the electric bougie for the dilation of strictures of the eustachian tube is still being held under judgment. While it may not have the wide application that some have claimed for it, and, like many good things, may be productive of great injury in unpracticed hands, it undoubtedly has its special indications.

Dr. F. R. Packard reports two cases of pus discharging from the parotid gland through the fissure of Santorini, the drum membrane being intact.

The importance of examining the ears in every case of severe acute pneumonia in children is pointed out by T. Stacey Bilson, who believes that otitis media is present in the majority of fatal cases of this disease.

Dr. M. G. Ward claims good results from the use of formalin in suppurations of the middle ear, and states that many of the disagreeable symptoms, such as fetid odor, discharge, etc., are promptly relieved.

Dr. H. Gaudier recommends the instillation of methylene blue in otitis media and fetid otorrhea of children. Dr. A. Ghon gives evidence to prove that the *Micrococcus catarrhalis* is pathogenic and that it closely resembles the pneumococcus and the influenza bacillus.

For more than a year Dr. E.P. Snydacker of Chicago has used the microscope as an aid to the diagnosis and prognosis of chronic suppuration of the middle ear, and he thinks that bacteriologic examinations of middle ear discharges have no value whatever in determining the outcome of the disease.

Dr. Chalmers Watson uses a preparation of bone marrow, which he calls myelocene, in the treatment of deafness from middle ear origin. He claims that this product produces an internal secretion which acts as a powerful prophylactic against the action of bacteria.

THE MASTOID.

The indications for surgical intervention in mastoid disease are not yet well defined, for the symptoms bear no distinct relation to the pathologic conditions within the mastoid process. Auscultation of the mastoid by means of a stethoscope and tuning fork is strongly recommended as being of a diagnostic value.

Dr. G. Alexander reports eleven cases of mastoid operation in Politzer's clinic, under cocain anesthesia, and so successful was the procedure that he recommends the method in all cases where the coöperation of the patient can be secured.

Dr. C. A. Ballence reports a case in which a ragged opening in the dura one-third of an inch in diameter, through which the brain was visible, and a clear fluid escaped, was successfully closed by a graft of epithelium. Skin grafting after mastoid operations has come to be an important feature of aural surgery.

FOREIGN BOOKS RECENTLY PUBLISHED.

The Accessory Sinuses of the Nose, Their Surgical Anatomy and the Diagnosis and Treatment of Their Inflammatory Affections. A. Logan Turner, M.D., F.R.C.S.

Purulent Nasal Discharges; Their Diagnosis and Treatment. Dr. Herbert Tilley, B.S., F.R.C.S.

A Handbook of Diseases of the Nose and Pharynx. Fourth Edition. James B. Ball, M.D.

Atlas of Diseases of the Nose, of Its Accessory Cavities, and of the Naso-Pharynx. Dr. H. P. Gerber.

Diseases of the Nose and Pharynx. Fourth Edition. J. B. Ball, M.D.

The Surgical Anatomy and Operative Surgery of the Middle Ear. A. Broca. Translated by Macleod Yearsley, F.R.C.S.

Diseases of the Upper Respiratory Tract: The Nose, Pharynx and Larynx. P. Watson Williams, M.D.

Diseases of the Nose and Throat. Second Edition. F. de Haviland Hall, M.D., F.R.C.S., and Herbert Tilley, M.D., B.S., F.R.C.S.

A Monograph on Laryngeal Phthisis; or Consumption of the Throat. Richard Lake, F.R.C.S.

Therapeutics of Diseases of the Ear. Drs. M. Lermoyez and M. Boulay.

History of the Diseases of the Larynx. Dr. C. Chauveau.

Diagnosis and Treatment of the Nose. Second Edition. Dr. J. Garcel.

Atlas of Diseases of the Nose. Dr. Robert Krieg.

Hare-lip and Cleft Palate. Dr. R. W. Murray, F.R.C.S.

Diphtheria: Its Definition, Pathogenesis, Diagnosis and Prophylaxis. Prof. E. von Behring.

AMERICAN BOOKS RECENTLY PUBLISHED.

A Text-Book of Diseases of the Nose and Throat. Second Edition. D. Braden Kyle, M.D.

Essentials of Diseases of the Nose and Throat. Dr. E. B. Gleason.

The Diseases of the Respiratory Organs, Acute and Chronic. Wm. F. Waugh, A.M., M.D.

The Eye, Ear, Nose and Throat Year-Book, Vol. III, of the Practical Medicine Series. Edited by Dr. G. P. Head, with the Collaboration of Drs. Casey A. Wood, Albert H. Andrews and T. Melville Hardie.

The Nose and Throat. New (2d) Edition. Dr. Cornelius G. Coakley.

A Text-Book on Diseases of the Ear, Nose and Throat. Drs. Chas. H. Burnett, E. Fletcher Ingals and James E. Newcomb.

Studies of the Internal Anatomy of the Face. Dr. M. H. Cryer.

A Chart of Diseases of the Lungs, Pleuræ, Bronchi, Trachea and Larynx. Dr. Edward C. Hill.

A Treatise on the Diseases of the Throat, Nose and the Associated Affections of the Ear. Dr. Chas. P. Grayson.

Original Articles.

ILLUSTRATIVE CASES OF CEREBROSPINAL FEVER.*

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PHILADELPHIA.

The tendency of infectious diseases to exhibit themselves in certain well-differentiated forms or types is perhaps particularly well seen in cerebrospinal fever. So true is this that although the complex of symptoms is exceedingly characteristic in the cases of average severity, the variations on the one hand to the malignant form, or, on the other, to the extremely mild or the abortive type are so great that the diagnosis may be rendered very difficult.

The title "Cerebrospinal Fever" has been chosen advisedly instead of cerebrospinal meningitis, because I have in mind here the disease which appears to be a specific infectious one, coming generally in epidemics, and having a certain definite though varying group of symptoms. It is by no means certain that this affection differs in any way from cerebrospinal meningitis not of an epidemic nature. From this latter point of view the cases are, of course, very much more numerous and the symptoms still more varying. All of the cases used in this paper with the exception of the last are, however, instances of the epidemic form of the disease, and in the last one the symptoms are so typical of one of the forms that I have used it for the sake of illustration.

Just a short sketch of the ordinary symptoms of the affection may not be out of place. The disease is not a very common one in this country as compared with some of the other infectious disorders. Its symptoms vary greatly in different epidemics and in different cases in the same epidemic. To follow one of the simpler methods of subdivision we may divide the cases into the following types: (1) the ordinary, (2) the malignant, (3) the mild, (4) the abortive, (5) the intermittent, (6) the chronic.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. Edwin Rosenthal, H. M. McClanahan and Samuel W. Kelley.

1. In the ordinary form prodromes may be present, but are usually absent. When present they last a few hours up to a few days and are very indefinite in nature. The attack begins with headache, vomiting, fever, and in adults a chill. Children often have convulsions. The face has an expression of pain. Very soon stiffness and pain in the neck and back develop. This is very characteristic. Headache, photophobia, irritability and other evidences of meningitis are marked. The forearms are flexed on the arms, and the legs on the thighs, the head is often very much retracted, there is intense pain and decided general hyperesthesia. Delirium is common, the bowels are constipated, the abdomen often retracted, herpes is frequently seen and petechiæ often develop. Convalescence may begin in one or two weeks, but is often deferred much later.

2. In the malignant form the disease begins with extreme suddenness and the symptoms appear at once and in the most intense way. Collapse with coma soon develops. General convulsions are common. Death occurs in a few hours.

3. In the mild form the patient may be so little ill that he hardly needs to go to bed. There is severe headache, possibly nausea, rarely vomiting and but little or no fever. The neck may be slightly stiff. The diagnosis is almost impossible in sporadic cases.

4. In the abortive form the disease begins as in the ordinary type, but recovery suddenly takes place in two or three days.

5. The intermittent form exhibits intermissions in the symptoms which suggest malarial fever, but which do not occur with any definite regularity.

6. In the chronic form the case drags on for weeks. There is vomiting, irregular fever, sometimes temporary improvement followed by disappointing relapses and progressive and extreme emaciation. I have never seen greater wasting than may take place in this condition.

With the purpose of emphasizing the variation in the symptoms which this disease may show rather than with the thought of advancing anything new on the subject, it has seemed to me of possible interest to present to you the following histories of three different family epidemics or outbreaks of the affection, and of two chronic cases, one of which occurred sporadically. Though I have seen many other instances of the disease I will make no reference to them, as they illustrate no special point.

The first of the epidemics which I shall record occurred in two sisters whose parents fled with them from the board of health of one of the towns of Pennsylvania to Philadelphia. They entered the Children's Hospital and were found here by the local health authorities, but were allowed to remain with us. Their clinical histories are as follows:

CASE 1.—Minnie W., 4 years, 4 months of age; admitted to the Children's Hospital, Philadelphia, May 2, 1893. She was one of three children, the youngest a baby of 1½ years, and the other entering the hospital at the same time as herself. Though weakly at first she became a strong child and had never had any serious illness until the present one. She was not at all well on the night of April 30. Awaking on the morning of May 1 she refused to eat, was thirsty and vomited. The vomiting continued throughout the day. The child lay on the lounge, constantly calling for water, was restless and dull, but recognized her parents. The bowels were moved twice on the night of May 1. On May 2 the thirst was still intense, although vomiting occurred every time that water was taken.

Examination on admission showed the child extremely restless and throwing herself about the bed. The mind was evidently not clear, the head was somewhat retracted, the tongue coated, the pupils dilated and not responding to light. Small purpuric spots about the size of a pinhead were scattered over the trunk, especially over the abdomen.

During the day restlessness continued. There was some cyanosis and the pulse was weak. Bromid of potash given by the mouth was vomited. By afternoon stiffness and retraction of the neck had increased decidedly; there was gritting of the teeth; the *tâche meningitique* was not well marked.

The child continued in much the same condition for about twelve days, with the mental state slightly improving. The head was then only slightly retracted, and the mind seemed for the most part clear, the pupils having been normal for several days. She slept much, though lightly, and she had been able for some days to lie upon the back. She continued to lie quietly most of the time, though sometimes fretful, with no retraction of the neck during most of the month of May. There was no stiffness of the neck. On June 1, i. e., about the thirtieth day of the disease, it was noticed that she was still irritable. On June 27, nearly two months from the onset, a note was made that she was, on the whole, steadily improving, talked to her father, tried to sit up, and fed herself, although still very weak.

The temperature had been elevated at first, reaching frequently 104, and then gradually falling, finally showing well-marked morning remission with evening rise. It did not remain continuously normal until about May 27, a period of twenty-five days from the date of admission.

The child was taken home shortly after the end of June, and some months later was brought back to the hospital on account of absolute deafness, which the aural surgeon reported to be due to the cerebrospinal fever.

CASE 2.—Rose W., 3 years, 4 months; admitted to the Children's Hospital the same day as her sister—May 2, 1893.

She had always been well except for measles a year before and an attack of vomiting three months ago. She was taken ill with the present attack April 27, with pain in her foot. Swelling of the face then developed, but soon disappeared. Very soon after this the neck became stiff and the head retracted. On the first and second night of the disease she was extremely restless with constant jactitation. After that she was stuporous, calling for water at times, crying out when disturbed as though in pain, with opisthotonos, marked cyanosis, and small reddish spots on the trunk.

Examination on admission, the fifth day of the disease, showed the child stuporous, occasionally crying for water, and not putting out the tongue when requested. The head was much retracted, the pupils dilated and not responsive to light. The reddish spots mentioned were found on the back and chest. By afternoon there was a very marked arching of the back and retraction of the head. Efforts to straighten the body gave pain. The spots were not so numerous as on admission. They disappeared on pressure. The *tâche meningitique* was slightly marked on the abdomen. For over a week from this date the mental state improved somewhat and the retraction of the head seemed disappearing. By May 12, two weeks from the onset, the child was talking, and interesting herself with objects given her. By this time there was little retraction of the head, although passive movement of it caused pain. She had been excessively irritable for a time, but this had now nearly disappeared. The expression of the face was entirely intelligent. After this date up to the end of the first month she was not so well. The retraction of the head and the irritability had returned. Removal to the general ward had been followed by an increase of symptoms, and she was again put in a separate room. By May 22, the twenty-fifth day of the disease, she was comatose, with extreme opisthotonos, resting on her head and nates. By May 29 this was slightly better, but she lay entirely quiet, unconscious, with dilated pupils, staring eyes and frequent twitching of the eyeballs. The *tâche* on the abdomen was now very marked. From this time on she grew steadily worse. Emaciation was decided. Sensation to pin-prick seemed entirely absent. On June 27, two months after the onset, a note was made that she had continued lying almost like a log, with forearms extremely pronated, wrists flexed at a right angle, feet in extreme extension, ankles, elbows and wrists stiff, fingers and

thumbs flexed, pulse weak, swallowing difficult. Ecchymotic and purpuric spots, most of them minute, were scattered over the trunk and to some extent on the legs and arms. This condition continued until July 11, two and a half months from the beginning of the affection, the body becoming covered with a widespread purpuric eruption. Unconsciousness persisted, the child lying like a log. She died on this date.

These cases illustrate a grave form of the disease; the first recovering after a long illness and showing one of the sequels, absolute deafness, which is not an infrequent result in this affection. Both cases were treated with occasional doses of bromids and with the persistent administration of opium in fairly large amount. The second case illustrates very well the extreme opisthotonos which may develop, the head at times almost touching the back between the shoulders. It showed also the widespread purpuric eruption which sometimes occurs in this disease, and the temporary improvement followed by relapse, which unfortunately is not an uncommon occurrence.

The second epidemic was most interesting, showing three types of the disease: the malignant, the one of average severity and the very mild. All three were members of one family, two of them being admitted to the Children's Hospital on the same day.

CASE 3.—Charles K., 2 years old; admitted to Children's Hospital on Feb. 23, 1900. The child was taken ill the day before with symptoms not well defined or described. He was brought to the hospital on account of convulsions. There had been no irregularity of the bowels. On admission he was in violent convulsions, with a temperature of 101 degrees, which rose to 103 by 4 p. m., when he died, the convulsions having continued unabated.

CASE 4.—Joe K., 4 years old; admitted to the Children's Hospital on Feb. 23, 1900. He was taken ill February 15 with fever. The bowels had been regular. On admission, i. e., the ninth day of the disease, he was found to be unconscious, arousing slightly when disturbed. There was occasional gritting of the teeth. The pupils reacted to light, the face was pale, the neck stiff, the heart, lungs and abdominal viscera normal; a well-marked *tâche meningitique* was present; the knees were constantly drawn up; Kernig's sign was absent. During the night he was very restless, crying out almost continuously. On the morning of the 24th his pulse was somewhat weaker; there was twitching of the muscles of the face; the neck was very rigid. The child was extremely delirious and restless, either throwing himself about and climbing up in the bed, or lying on his side with his legs drawn up. The neck was only slightly retracted. He realized when milk was offered to him and drank it. On February 25 lumbar puncture was performed, but no fluid was obtained. By the 28th he was quieter and was more disposed to lie on the back. By March 1, i. e., two weeks from the onset, the legs were at times extended, and he was clearly much better in every way. On the next day he was able to take a glass of milk in his own hands. The *tâche* was still present, although the neck was not so rigid. No eruption had been present at any time. His mind was distinctly clear and the general condition better. From this time on the condition continued to improve until March 9, the end of the third week, when the temperature rose and the throat became red and the nose was discharging. By the end of the fifth week he was very much wasted, the neck was still rigid, a slight *tâche* was present, there was no pain except on moving. The child would smile feebly and put out his hands when approached, but looked weak and ill. From this time on he failed to improve. His neck remained slightly rigid, his appetite diminished, he cried if disturbed. His legs were again drawn up and could not be extended without pain, and the mind again commenced to be clouded, and by April 12, the end of the eighth week, he was unconscious. He again improved somewhat, and was removed by his parents. His after-history is unknown to us.

The temperature of this child was high on admission to the hospital and continued irregularly so until nearly the ninth of March, when, contemporaneously with the general improvement, it was on some days below 100. On the 12th it rose again to 104 or 105 and from this date onward showed great irregularities, reaching sometimes almost normal and sometimes 105. When the child was removed from the hospital it showed still the same irregularity.

CASE 5.—Mary K., 5 years old; admitted to Children's Hospital, Feb. 23, 1900, on the same day as her two brothers. Her previous history and the day of the onset of the disease are not recorded, but she was sent to us with the diagnosis of typhoid fever, and it is therefore probable that she had been ill for some days. On admission she was pale, lay quietly, or cried when disturbed. Her neck was rigid, the pupils reacted to light and were not dilated, the heart and lungs were normal, and the *tâche meningitique* was present on the abdomen. She slept much on this day and on the next. When aroused she was conscious and had an intelligent expression, and protruded the tongue when requested. The head was not retracted, and the legs were extended, although the neck was stiff. When lying on her side the back was slightly hollowed. By February 25 her intelligence seemed entirely good. The child lay comfortably on her back. Her neck was still stiff and passive movement of the head gave pain. On this date lumbar puncture was performed, but no fluid was obtained. On the 28th she had very greatly improved, and seemed to understand all signs made to her (she did not speak English), and her neck was no longer stiff. By March 3 she was entirely convalescent, and by the 10th was out of bed.

Her temperature ranged between 101 and 105 during the early days of her presence in the hospital. From February 26 to March 2 it was about 100, with only slight variation, and after this latter date was practically normal.

This epidemic illustrates, as stated, three types of the disease. In Case 3 the diagnosis could not possibly have been made had it not been for the family history. The course toward the fatal issue was rapid in the extreme. Case 4 illustrates one of the more chronic forms, yet differing from that of the case of recovery of the first epidemic (Case 1). There were never so marked cerebrospinal symptoms, but, as sometimes seen in this disease, the child seemed unable to progress, and the tendency to relapse was very evident. The third case was of so mild a type that a diagnosis could not have been made had it been an isolated instance. The rigidity of the neck was so trifling that it might easily have been overlooked. The child had not at any time seemed particularly ill.

The third epidemic illustrates another very interesting fact, namely, the relationship which this disease, cerebrospinal fever, bears to pneumonia. As is well known, the germ of the two diseases is very probably the same. The cases were seen in consultation with Dr. James C. Chestnut of Philadelphia.

CASE 6.—Frank B., 6 years old; seen for the first time Nov. 18, 1900. The child had been taken ill November 15 with headache, vomiting, high fever and slight cough. On examination nothing was discovered wrong with the respiratory apparatus. On the next day, the 19th, the child still had fever and was very restless and constantly delirious. Severe pain in the back of the neck was occasioned by any movement of the head. There was no *tâche*. On the 20th he was rather dull, delirious, seemed to dread the light, and continued to suffer from the pain in the back of the neck, and to cry out whenever the head was moved. At times there was arching of the body or jactitation. Respiration was rather rapid but easy, fever continued, examination of the lungs showed no positive changes. By November 21, i. e., after six days of illness, he was worse in every way, and the temperature was still high. On the next day he was noticed to be excessively restless nearly all the time, with continued unconsciousness, dilated pupils, high fever, occasional flushing of the skin, well-marked *tâche meningitique*, irregular and often slow pulse, and pain on passive movements of the neck. A blood count on this date gave 32,000 leucocytes.

From this time the child failed rapidly. The tongue grew dry, and inability to swallow developed. Attacks of sinking occurred and the temperature fell to about 102. Examination for Kernig's sign on November 25, the child lying on its back, gave a negative result. Death occurred November 26, after a week and a half of illness. No autopsy was permitted, and even a postmortem lumbar puncture was refused.

CASE 7.—Samuel B., 10 years; seen for the first time Nov. 20, 1900. The child was taken ill suddenly on November 19, four days after the onset of sickness in his brother Frank—with fever, vomiting, headache and restlessness. Examination showed him to be dull, sleepy and not responsive to questions or to the request to put out his tongue. He was irritable, resisted examination, and lay curled up on his side. On the 21st he was rather better, but still had fever. On the 22d his mind was clear; the temperature was still elevated; the *tâche* was present on the abdomen; there was no pain complained of; suspicious physical signs pointing to pneumonia of the right lung were discovered. On November 23, the fifth day of the disease, the temperature fell critically to normal; the *tâche* was still present and the right lung was found extensively consolidated. By the 28th the lung had apparently undergone resolution entirely and the child was quite convalescent.

CASE 8.—Clifford B., 4 years old; seen for the first time on Nov. 18, 1900. He was taken ill about November 11, four days before his brother Frank, with fever and cough. These symptoms had continued with some acceleration of respiration and slight delirium on waking from sleep. Examination showed consolidation of the left lung posteriorly. The abdomen was slightly distended; the liver and spleen normal in size. By November 20, the tenth day of the disease, the child was better in general condition, but the consolidation of the lung had extended. The *tâche* on the abdomen was marked. The child had had no nervous symptoms and his mind was entirely clear throughout. By November 22 the temperature had fallen to normal and the child was convalescing.

Here we have three children taken ill within a week of each other. The first to be affected (Case 8) suffered almost purely from croupous pneumonia, the only symptom suggesting meningitis being a *tâche cerebrale,* which was unusually well marked. Yet this was not, of course, positive proof that meningitis was actually present.

The last child to be taken ill (Case 7) exhibited a condition which could hardly be considered merely symptomatic of pneumonia. It suggested rather a cerebrospinal fever of mild type, such as the third case of the second epidemic (Case 5) exhibited, combined with an involvement of the lung. The remaining child (Case 6) gave a typical picture of severe meningitis with no involvement of the lung discoverable. It is greatly to be regretted that lumbar puncture was not permitted in these cases. Yet even in the absence of positive proof scarcely any other conclusion is justifiable than that all three children were attacked by the same infectious agent, which showed merely a difference in the point elected for its specially deleterious action.

The next case, although isolated, is clearly traceable to a known infection. It was seen in consultation with Dr. George B. Wood of Philadelphia.

CASE 9.—Roscoe L., male, 10 years old, was exposed some time during the autumn of 1898 to cerebrospinal fever while his father was in camp at Tampa, where several cases of the disease were known to exist. The exact details of the case are not known, since a record was not kept, but are about as follows:

The boy came to Philadelphia and about two weeks later developed the first symptoms of the disease and the diagnosis of cerebrospinal fever was made. The case ran a characteristically chronic course for about two months. At times the disease strongly suggested malarial fever, but close observation of the temperature showed an absence of regularity. There was a decided tendency, on the whole, for the temperature to resemble a septic fever, being elevated in the evening and depressed in the morning. With the elevation of temperature the mental state and the general nervous symptoms always became worse, the child being delirious and exceedingly irritable. Apart from these changes there repeatedly occurred periods where convalescence seemed established. In these the temperature remained practically normal, the mind quite clear, and the nervous symptoms absent. Then relapses would occur with fever, retraction of the head, vomiting, rigidity of the spin, and intense pain in the neck. As the disease progressed emaciation became appalling. Towards the end he complained of not being able to see distinctly, although hearing was still good. Vomiting finally became a very pronounced symptom and no food could be retained. He died, practically from starvation, after an illness of about two months.

This case illustrates especially well the repeated disappointing relapses which take place in some of the chronic forms, and the emaciation which may finally result. The boy was as wasted as the most marantic infant I have ever seen.

The last case was for a time a most puzzling one in the matter of diagnosis.

CASE 10.—Charlie W., 6 years old; admitted to the University Hospital on Aug. 9, 1901. Without previous symptoms he was noticed to be slightly dull on the morning of August 5, to refuse his food, and to complain of abdominal pain. The symptoms continued, and on admission to the hospital on the fifth day of the disease he was in a heavy stuporous state, not answering when spoken to, crying when disturbed, with the neck slightly rigid, and the respiration quiet. Examination of the blood showed a leucocytosis of 35,000 and a positive Widal reaction. The urine contained a trace of albumin. The temperature was over 105 F. This condition continued with very little change, with irritability and stupor alternating. The temperature remained elevated except when reduced by tub-baths. There were sometimes drops to 99 F., or thereabouts, without the agency of a bath, but this did not happen often. The child was frequently very nervous, and would cry out when touched. The *tâche meningitique* was present on the abdomen, and there was some photophobia. The leucocyte count reached as high as 43,620 to the cm. on August 11.

Examination on September 7, after a month's illness, showed the absence of any affection of the heart or lungs, and of discharge from the ears. The pupils reacted to light, there was partial paralysis of the muscles of the right side of the tongue and tenderness over the entire spinal column, although most marked in the cervical region. The *tâche meningitique* developed slowly. Babinski's reflex could not be obtained.

The repeated examination of the blood had shown always a high leucocyte count, never below 35,000. The temperature had grown gradually more irregular, and after August 27 hydrotherapy was no longer needed.

The child now improved, although almost imperceptibly. The temperature continued extremely irregular and generally considerably elevated. He was for the most part unconscious, but cried when disturbed. Sometimes he was very restless and fretful at night time. He took his nourishment fairly well. The leucocyte count on September 26 was 22,120. By this time the child was distinctly improving, being decidedly brighter, less fretful by day and sleeping more by night. By October 3, about two months from the onset of the attack, his temperature was often below 100, though occasionally slightly more elevated, and was seldom over 102. He complained frequently of headache and of pain in the abdomen. He seemed to understand everything that was said to him. A few days later the Widal reaction was for a second time positive. Now that he could protrude his tongue when asked to do so, it was noticed that the right side was very greatly atrophied, the left side being normal and the tip being turned to the right. He had great difficulty in masticating and even in swallowing soft food.

He was very tremulous and there was some pain in the neck in passive movement of the head. By November, after an illness of three months, he was still quite sick, although the mental condition was improved. The temperature was now generally below 100, although there were occasional rises to 103 or 104, for which there appeared to be no reason. The bowels, which for a long time had been opened once or twice a day, now be-

came less frequently moved. Early in December, i. e., after four months' illness, he commenced to sit up part of every day and was bright, frequently talking and singing. The condition of the tongue was unchanged. It was not until the early part of January, after five months of illness, that he was able to stand alone, although he was still unable to walk. During his illness he had grown very thin though not extremely emaciated. He was discharged from the hospital at the end of January, about five and three-quarter months from the time of the beginning of the attack. By that time he was apparently nearly well, although still thin and not strong, and still with occasional rises of temperature to between 100 and 101. The number of leucocytes by this time had fallen to 16,800 and the Widal reaction was negative.

The interesting feature of this last case is, as stated, the question of diagnosis. The Widal reaction and the high leucocyte count exactly contradicted each other. It was at first supposed that the child had typhoid fever with possibly some local inflammatory process which accounted for the increased number of white cells. As the case progressed, however, the diagnosis of cerebrospinal fever became more certain, and the remarkable hemiatrophy of the tongue seemed to assure it. From this point of view the Widal reaction must then either have been the result of typhoid fever which had occurred at some previous time in the child's life and had never been recognized, or of an attack of this disease occurring coincident with the cerebrospinal fever. Which of these two suppositions is the most probable can only be surmised.

DISCUSSION.

DR. J. V. KOFRON, Cleveland, Ohio—I should like to ask if Dr. Griffith searched for Kernig's sign, and how much reliance he places on it.

DR. C. F. WAHRER, Fort Madison, Iowa—I had a case in a girl of 3½ years, which had been treated by an intelligent country physician for typhoid fever. As we all know, the symptoms in these two diseases are not always very clear. The child was stupid and had a temperature reaching as high as 106 F., and remaining most of the time at about 102 F., without abdominal tenderness. There had been a slight rash, which had been mistaken for typhoid fever. At the end of two weeks I was asked to see the patient with the physician. From the spinal rigidity and from the application of Kernig's sign, as well as from the general symptomatology, I felt justified in changing the diagnosis to cerebrospinal fever. The subsequent history proved the correctness of this diagnosis. At times there was violent opisthotonos and severe spasmodic contractions were also present, with emaciation to a remarkable degree. While many times the patient seemed to be conscious, she was unable apparently to receive an impression or give one. At times this patient seemed better and at other times worse. I saw the child once or twice afterward and believed she would ultimately recover on account of having held out so well. For ten weeks the disease lasted, the child finally succumbing with symptoms such as have been described in this paper. Would a Widal's test for typhoid and the microscopic test of spinal fluid for the Weichselbaum's bacillus always determine this differential diagnosis?

DR. I. A. ABT, Chicago—What should be done with regard to the isolation of these cases? Should they be treated in the general wards of hospitals? I have seen them treated in the wards and in homes without any attempt at isolation. The experience of Dr. Griffith with this disease, especially as to its epidemic nature, should, I think, lead us to isolate them. The deafness which follows attacks of cerebrospinal meningitis has received attention. It has been shown in connection with a study of the subject of deaf mutism that this condition increases in those years in which cerebrospinal meningitis is epidemic in certain sections of the country. I have in mind a case of cerebrospinal meningitis occurring in a child of 2½ years. The duration of the disease was protracted, and lumbar puncture showed the presence of the *Diplococcus intracellularis*. The child eventually recovered with a marked hydrocephalus. This occurred five or six years ago, and I occasionally see the child now, and find that the hydrocephalus is on the increase. Recently I reported 90 cases of typhoid, which I studied in my hospital practice, and two of these very closely simulated cerebrospinal meningitis. One of them was looked on as an example of cerebrospinal meningitis for a period of one week after admission. The child entered the hospital with severe headache, vomiting and high temperature; opisthotonos was present as well as marked delirium. A lumbar puncture was made and the Widal test at the same time. The former was positive, while the latter gave no growth on the smears. The meningeal symptoms, however, were so marked that we were inclined to regard it as a case of meningitis. At the end of a week the meningeal symptoms subsided, and the typhoid symptoms became more prominent. I know that these cases of meningismus are common enough, nevertheless, when one has such a case under examination for an entire week, wondering whether the Widal test or the results of lumbar puncture will clear up the diagnosis, it seems worth while to emphasize the fact that meningeal symptoms persisting and striking in character may occur in several acute infectious diseases.

DR. T. M. ROTCH, Boston—This is an exceedingly interesting class of cases. In private practice it becomes a very serious matter at times what to tell the parents as to the diagnosis and prognosis. In hospital practice it is not of so much importance. I have had a number of these cases to treat, both in hospital and private practice, in Boston during the last two or three years. The first thing that is asked is concerning the diagnosis, and that is a difficult question to answer. The physical signs of cerebrospinal meningitis in the earlier periods of life are very indefinite at times. One does not get marked symptoms, just as one does not observe in babies marked signs in cases of tubercular meningitis. Nevertheless, we must make a diagnosis. These cases may occur in very young infants without any rigidity of the neck, opisthotonos or any special sensitiveness to touch. I have had a case in a baby three or four days old, in which there was nothing but slight irregular convulsions, and in which lumbar puncture proved conclusively, by the presence of the *Diplococcus intracellularis*, the importance of the case. Lumbar puncture is of great value for diagnostic purposes. Moreover, it is in the very early days—in fact, in the first week almost—that we must use lumbar puncture in order to get positive results. This diplococcus, unlike the bacillus of typhoid, passes away very quickly, so that if lumbar puncture is delayed its results are untrustworthy. This applies even to pronounced cases of cerebrospinal meningitis. In like manner the Widal reaction may show the presence of typhoid, but we do not know at what time, as in the case reported by Dr. Griffith. The Widal reaction lasts for months, and perhaps for a year, after an attack of typhoid. If there is a Widal reaction and a clear fluid following lumbar puncture, without evidence of meningitis, one may be pretty sure that there is a typhoid fever with only the symptoms of meningitis arising from the toxins of typhoid. Typhoid fever, being a benign disease, in the early months and years of life children will get well; on the other hand, cerebrospinal meningitis is an exceedingly dangerous disease. Lumbar puncture has so far not seemed to be curative in cases of meningitis, though most useful in diagnosis. I had a case in my wards last winter which had passed through the acute stages and become chronic. The child was practically idiotic and was failing. I had another lumbar puncture made, simply to see whether the condition could be relieved. There was no question that after the withdrawal of the fluid the child became brighter, and it eventually recovered. One case does not prove anything, but it is interesting, and I may say that I am about to advise this procedure in another case now under observation. I should advise practitioners generally to make use of this procedure more freely in these exceedingly severe and desperate cases. In the cases of stupor and progressive idiocy the lumbar puncture is especially useful. The fluid should be allowed to flow as long as it will drain freely. I do not aspirate it, but allow it to flow under its own pressure. Sometimes only a dram or two are removed; at other times much more escapes. The Widal reaction is very apt not to be found

in the first two weeks of typhoid fever in a child, but when found is positive. Lumbar puncture will also show whether or not there is a typhoidal meningitis. Meningeal symptoms are common in typhoid without meningitis, but there is also a true meningitis caused by the typhoid bacillus. These cases may show all sorts of disorganization of the brain or cord, which may be attributed to cerebrospinal meningitis, but which are really due to the typhoid meningitis.

The fulminating cases are certainly the most dangerous. Usually the favorable cases are those which linger until the second or third week. If the disease lasts longer than this, however, the parents should be warned that the prognosis is more grave. Having passed into the third or fourth week the parents should be told that the child will not die of the acute process, but that the disease has become chronic. Unfortunately, these cases are becoming more and more common, and, as a rule, the prognosis is bad. In Henoch's cases in Berlin, some fifteen years ago, recovery took place. My cases of about ten years ago all died, while within the last few years a certain number of the chronic variety have recovered. Statistics of this kind may, in time, enable us to make a fairly correct prognosis as the disease progresses. The chronic cases are very interesting. At times they go on until the child gets extremely emaciated. Not only this, but rigidity and contractures occur and the child becomes idiotic. Sometimes, however, all these symptoms pass off. I know of such a case in Boston, in which the disease lasted for months and was associated with great mental disturbance, and yet to-day this person is a very bright and intelligent man. We should, therefore, be cautious in giving the prognosis. There is a much better opportunity for recovery than in any other form of chronic central nervous disease. I have now under observation a young baby of twelve months, on whom I intend to resort to lumbar puncture. The case has lasted for three or four months; the child is dull and practically idiotic. These cases of chronic meningitis, as you know, run on with a temperature of 101, 102 or 103 F. for a week, and then the temperature will run for four or five days or more nearly normal, the child meanwhile improving. This will be followed, however, by another relapse. The child I have spoken of has had seven relapses, and, of course, each relapse adds so much more to the danger. It comes finally to a question of nourishment. This baby vomited everything it took after the third or fourth relapse. I then advised the physician to feed it with a tube, and it is now three months that the child has been fed every three hours with three or four ounces of milk introduced into the stomach by means of a stomach tube. The child had lost the power of swallowing, or at least regurgitated everything swallowed in the usual way, but this has not occurred since the food has been introduced by the tube.

To summarize: It is not unusual to find cases in which the diagnosis of cerebrospinal meningitis is not very evident; hence lumbar puncture is useful. Again, tell the parents that the first four or five days are very dangerous, and that another dangerous period comes in the second or third week, the danger then being not so much as regards the sacrifice of life as of the disease becoming chronic and the mental faculties greatly impaired. Lastly, we must keep up the nutrition by every possible means.

DR. EDWIN ROSENTHAL, Philadelphia—I should like to ask Dr. Griffith if the cases that recover are either right-handed or left-handed. Again, with regard to the treatment, I should like to know if, in the severe cases, hot baths were used. Still another question, is lumbar puncture practiced more than once in the same case?

DR. ROSA ENGLEMAN, Chicago—I should like to ask Dr. Griffith whether any eye examinations were made to determine the condition of the fundus. I have in mind a case of cerebrospinal meningitis in which this was done, and the findings in the fundus were absolutely negative.

DR. THOMAS J. ACKER, Croton-on-Hudson, N. Y.—My observation has been that the disease is usually ushered in during the night. The child will go to bed perfectly well, and the next morning will be found very ill. I have seen fifteen or twenty cases that have begun in this way. My experience has been that three remedies can be used with benefit One of these is the bromid of potassium for the convulsive stage; another is the tincture of gelsemium, and the third is Fowler's solution of arsenic. These three remedies judicially used have given me the best results in the treatment of cerebrospinal fever.

DR. J. P. GRIFFITH—In the title of my paper I used the words cerebrospinal fever rather than cerebrospinal meningitis, not because I am convinced that there is any essential difference, but because my cases, with one exception, were all illustrative of the epidemic type. I have seen a great many more cases in which I could not trace the disease to infection from another case.

Kernig's sign was searched for in some of the cases, but was not present. I am obliged to confess that I am becoming extremely skeptical as to the value of this sign, for I have found it repeatedly absent in many cases of meningitis of various forms. When present, it is of service as corroboration, but when absent we have no proof from that fact alone that the disease is not meningitis. Some of the cases reported occurred before our present interest in Kernig's sign developed.

In connection with the deafness in one of the cases reported, it is an interesting fact that in one institution for deaf-mutes in Germany more cases were due to cerebrospinal meningitis than to any other disease.

The resemblance of cerebrospinal meningitis to typhoid is sometimes particularly striking. I have seen cases which I was sure afterward were typhoid, but which at first I was positive were cases of meningitis.

In answer to the question asked about the likelihood of contagion in the disease, I would say that when the cases of the first family came to the Children's Hospital they were put into a separate room because we did not wish the board of health to take them from the hospital, but that after this danger had passed we put them into the general ward, for, I believe—and I think it is the general opinion—that the disease is no more directly communicable in hospital wards than is typhoid fever. There have been cases reported, it is true, in which the disease has been communicated, but these have been very few and exceptional.

I have been struck with the amount of opisthotonos present in this disease. Yet this alone is not sufficient to make a diagnosis of cerebrospinal meningitis. The most marked case of opisthotonos I ever saw was found afterward to have been due to tubercular meningitis, as shown by lumbar puncture. In another very extreme case there was congenital spastic diplegia present. Lumbar puncture showed no germs. An autopsy could not be obtained.

As regards the employment of lumbar puncture, I agree very thoroughly with what has been said by Dr. Rotch, but I am rather pessimistic as to the real therapeutic value of it. I have never seen any permanently good results from it. Yet as long as there is the slightest hope the procedure should certainly be persisted in. I have done it in cases of tubercular meningitis, hoping for nothing more than temporary relief, and this was, indeed, obtained. Not long ago I was called to do a lumbar puncture on a case at first of doubtful nature, but later found to be tubercular. The child was unconscious, and I removed a large test tube of fluid. A very little while afterward the child was able to speak its mother's name. A few days later I repeated the procedure because the child was again worse, and immediately after this the child was able to swallow food. A third time it was done, but without improvement. I had one case in which there had been a meningitis months before. The child had convulsions at times, lasting for days. These would always be relieved by lumbar puncture, and the child would be better perhaps for several weeks. The case went on in this way for months, but the exact termination I can not recall, except that the child did not eventually recover. This has been my usual experience: that no permanent good was to be expected. Nevertheless, I think it should always be done and the patient given at least the chance. I have not had any observations made on the eyes in most of my cases of meningitis, though it has been done in a few instances.

EPILEPSY—ITS PSYCHOPATHOLOGY, AND MEDICOLEGAL RELATIONS.*

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Epilepsy, independent of any gross disease or lesion of the brain, to which it is a sequence, has no distinctive morbid histology, so far as known. Gowers[1] says: "In considering, then, the pathology of epilepsy, we must seek other evidence as to its nature than that which is afforded by the negative anatomy of the idiopathic disease, and must draw our inferences from the morbid changes in organic disease attended by convulsion, from the results of experiment, and from the facts ascertained by the clinical study of the disease."

It is seldom that an opportunity is offered for the study of the histology of the brain in idiopathic epilepsy before the development of those changes which are common to all forms of degeneration, and which obscure everything else. The occasional epileptic who dies of some intercurrent disease, during the earlier stages of his epilepsy, does not present any brain changes different from those found in cases where death resulted from a similar condition, but where no epilepsy existed; and the morbid histologic changes in the cortex in those cases where epilepsy has followed gross disease or traumatism of the brain, do not present anything peculiar nor specific. Therefore we have practically no anatomic basis for the psychopathology of epilepsy. However, we have still to consider the probability that those individuals who become epileptic, do so because of some primary defect in the development of the brain which renders the cortical cells in the motor area abnormally unstable; so that causes of disturbance occurring in infancy, during the period of second dentition, or at puberty, may be sufficient to give rise to these explosive discharges of excessive motor activity, which we know as convulsions, and which have a tendency to become habitual. The fact that, in children, disturbances in the alimentary canal are the most common sources for the origin of the conditions which give rise to the convulsive outbreak, suggests that, as a result of the autointoxication, there are developed changes in the nutrition of the cortical cells, resulting in increased irritability and the production of these undue and untoward manifestations of motor activity.

This view of the pathology of epilepsy naturally suggests the mental status of the epileptic, his stability, and the extent of his cerebral potentiality. In accordance with current physiologic speculation, and the interpretation of the results of experiment, there are three general divisions of functional activity in the cortical portion of the brain mass. Impressions from the general surface of the body and tactile sensations are probably distributed indifferently, and coördinated with relation to such activities as they have previously given rise to. The special sense impressions are grouped in the posterior portion of the parietal, the temporal and occipital lobes; this grouping being the natural result of the necessities of their relation; because, to appreciate the significance of a visual impression, for instance, involves not only the necessity of its relation to a pre-existing similar impression, but also the recognition of the other attributes of the source of the impression, as they come through the other special senses; so that their coördination may result in the proper direction of the motor activity which results through the stimulation of the contiguous area in the superior and anterior portion of the parietal, and the posterior portion of the frontal lobes.

The one cerebral function which is least clearly understood, and yet which is the most important: the inhibitory and directory, almost certainly has its seat in the frontal lobes anterior to the precentral fissure; and the nature of this function necessarily implies that this portion of the brain is concerned principally with the function of intellection. We have direct evidence of this in the fact that mental reduction always advances *pari passu* with the destruction or atrophy of the frontal lobes; that is, the smaller the frontal are in proportion with the parietal lobes, the greater the instability of the individual. Considering the functions of the two portions of the brain, this should be obvious, for if the area for the reception of external impressions is disproportionately large so that the intellectual portion of the brain can not control nor direct them into the necessary channels of activity for the preservation of the organism, the result must necessarily be confusion and incoördination. How, then, shall we apply these deductions?

In order that we may understand the psychology of the epileptic, and appreciate what there is that is distinctive, it will be necessary to consider previously the dominant tendencies in his mental development. If he is congenitally endowed with a defective cerebral structure, we have a right to presume that which experience shows to be a fact: the tendency to the persistence of primitive characteristics, reduction in mental capacity, and the reversion toward the characteristics of a lower order.

Assuming that the individual who becomes epileptic during infancy or childhood, is born with an average cerebral potentiality; the development of some pathologic condition which is serious and persistent enough to bring about the phenomena of an epileptic seizure, and the formation of the epileptic habit; is also powerful enough to check or interfere with the development of the plastic brain mass of the child. Following the usual tendency of such processes, that part of the brain will be most affected which is latest in the order of development and most unstable. The result would therefore be the production of excessive instability, and the establishment of an abnormal irritability, with incoördination in the relation of the activities of the different parts of the brain mass. As the obvious result of this condition, there would be a constant tendency toward undue and irregular discharges of nervous energy; and in the presence of a sufficiently powerful stimulus, indefinite and explosive outbreaks of motor activity, instead of those which were uniform, coördinate, and habitual.

However, we are confronted with the fact that the pathologic or physical conditions which are supposed to be the basis of the epilepsy, are common in the life-history of most people. Prolonged high temperature, gastro-intestinal disease, and other causes of convulsion, are common to many infants; as chronic gastro-intestinal autointoxication and cerebral traumatism are to adolescents and adults; and yet relatively few become epileptic. The converse of this statement is also, in a measure, true; because the epileptic habit often owes its apparent establishment to some relatively trivial cause; but, at least in the majority of these cases, it will be found that the grand convulsion which apparently ushered in

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1. Epilepsy—Gowers, 2d Edition, p. 214.

the disease was preceded for an indefinite period by attacks of petit mal; or even nocturnal convulsions, which were not severe enough to attract attention by their effects.

It seems necessary to assume, therefore, that no one ever becomes epileptic who has not, what for want of a better name may be designated the epileptic constitution; or, to express the same conclusion in physical terms, a brain mass in which there is a tendency in the cells of the motor area of the cortex, to respond unduly to slight stimuli; thus bringing about an irregular, incoördinate and explosive discharge of motor energy which, if extensive enough, will and does produce unconsciousness from ischemia and shock, just as a blow on the head would. Indeed, it is quite common for insane epileptics, after a convulsion, to insist that some one hit them, and they point to the bruise made by striking the head as they fell, as evidence of the truth of their accusation. It is not probable that so powerful an expression of nervous energy can take place without involving, to some extent, in its effects other portions of the brain particularly, as well as the whole mass generally, as shown by the production of unconsciousness; and this involvement is made apparent by the existence of those manifestations which are termed the epileptic aura; especially that particular form which concerns the subject of this paper, the psychic aura. This form of aura is most common among the epileptics who are hysterical or insane, and may be compared with a dream; as a series of pre-existing impressions incongruously arranged; the vividness of which will depend upon some anticipated or suggested experience of the individual. It is probable that in those cases of epilepsy in which the psychic aura occurs, the loss of consciousness is comparatively gradual, and that the picture formed follows the same course of development, as do hallucination and illusion. The confusion resulting from the approaching cerebral storm, results in the wrong relation of external impressions, to be followed by the formation of a picture in the fast-dimming consciousness, usually untoward, disagreeable, or malevolent; because the nature of the seizure necessarily forces upon consciousness the conception of violence or discomfort; and external impressions of no matter what nature, would liberate in consciousness preëxisting impressions of experiences which had been painful and alarming. There are some cases, however, where there develop out of the physical discomfort attending returning consciousness well defined beliefs with regard to the environment of the victim, and the responsibility of those about him for his condition.

It is true that epilepsy may persist indefinitely and the outbreaks be frequent and extremely serious, without there being any marked mental reduction, but commonly, even in those cases where there is no mental aberration, and especially when the epilepsy has begun early in life, there is a progressive mental reduction, so that some epileptic children are entirely demented by the time they reach puberty. In others the mental reduction is not marked until maturity, when there is developed, as a sequence, a premature senility. This is also true in those cases of epilepsy where mental aberration is associated with the convulsive process. The individual either breaks down during the period of adolescence, in consequence of some profound disturbance, during adult life as from disease, or, more commonly, at the approach of senility. So far, then, as the psychopathology of epilepsy is concerned, we can omit the consideration of those cases in which there is no aberration nor reduction of mental capacity, because the term psychopathology necessarily implies the presence of both.

The more rapid the mental reduction after the establishment of the convulsive habit, the greater the psychic perversion and the more frequent those manifestations of mental aberration which belong to the epileptic; the post-convulsive furor, and automatism. The study of these maniacal outbursts indicates that they are the response to the impelling suggestions of unreasoning fear, following vivid hallucination, usually visual, but sometimes auditory. Or in cases where there is much mental reduction it is the expression of brutal impulse to wanton cruelty, in response to the gross irritation of the convulsive seizure. This latter is, of course, only the persistence in an exaggerated form of the tendency which is one of the most conspicuous survivals of primitive human characteristics. Sometimes these outbreaks, especially in the procursive form, are mere "running amuck," without regard to anything which comes in the way, and with no purpose.

Epileptic automatism implies a lesser degree of mental reduction and the persistence of considerable intellectual capacity. From a psychic standpoint this condition involves the suspension of active consciousness and the projection of activities which have their origin in centrifugally generated stimuli; which in their turn respond, in a regular sequence, to external impressions, without regard to their nature or origin, as shown in somnambulism. The persistence of automatism after the convulsion constitutes what is known as double consciousness. From what we know of the development of the brain functions, it is certain that most ordinary cerebral activities have a definite hereditary representation in the cortex, so that, as the experience of the individual brings them into active use, they become habitual and automatic long before others which are wholly acquired. It is therefore possible, in the presence of some condition which dominates active consciousness, or some defect in the development of the cortical cells, which lessen their potentiality and reduce their capacity, that the functions of relation and coördination of external impressions are for the time being seriously interfered with or even annihilated; and habitual activities, whose acquisition has been aided by heredity, although centrifugally generated, become for the time being the life expression of the individual. In three cases of double consciousness known to the writer the characteristics manifested by the individuals affected were distinctly of the family type; aside from those primitive ones which had to do with immediate self aggrandizement, such as the imperious will, the low cunning, and the lack of moral sense. If chicanery, brutality, or aggressiveness are actively manifested during automatic states the history of the case if carefully studied will show that they are but the exaggeration of traits natural to the individual. Furthermore, it is worthy of note that epileptics in whom automatism or the so-called epileptic psychic equivalent exist will almost invariably be found to be hysteric as well. The term psychic epilepsy has no real significance, because it implies a condition which in the nature of things could not exist; that is, that there was a mental instead of a motor convulsion. It is almost certain that this condition is a post-epileptic phenomenon; where the initial attack is the petit mal, which is obscured by the mental aberration which follows, and is manifested as automatism or a maniacal outbreak. Therefore it is a sequence to the explosion and not its equivalent.

The medicolegal relations of epilepsy cover such a wide field that it is important to understand what we mean by the term before we attempt a classification of those conditions present in epilepsy, which may have a legal bearing or present a legal aspect.

Such relations would imply that, any act of the epileptic which interfered with the welfare of another, or jeopardized the welfare of the epileptic himself, might bring him within the cognizance of the law, to determine, first, as to the nature of the act; next, how far it was habitual under similar circumstances; then the extent to which the epileptic was capable to, and did appreciate the significance of the act or acts, with relation to his environment. Finally, how and to what extent he might be able to appreciate his relationship to his fellows and control his conduct so as not to jeopardize their welfare.

In order to understand these different aspects of the relation of the epileptic to his fellows it will be necessary to understand his position in the family, the community, in society, and those abnormal conditions resulting from his disease, which might interfere with his relations to those about him.

Aside from the convulsion itself, the acts of the epileptic do not differ from those of other men. The question then, is, not the nature of the conduct itself, but how far it is an unnatural and unusual response to the conditions in the environment of the individual which gave rise to it.

The relation of the epileptic to the family does not differ materially from those common to all who are defective or afflicted. Like the hysteric, the epileptic becomes self-conscious, egotistic, imperious in will, and exacting. On account of his condition the family is disposed to yield to him, and protect him so far as is possible from the consequences of his condition or from anything he may do as a result of it. If the parents of the epileptic child do not exercise good judgment, nor appreciate the tendencies which are sure to develop from the lack of proper restraint and judicious training, the result is always serious, so far as the relation of the individual to the community and society is concerned. This is especially true of those epileptics in whom the motor manifestations are transient and slight, while the psychic disturbance is considerable and persistent.

Having been accustomed in the family to dominating its members, to have his slightest desire always acceded to, and to suffer no punishment nor discomfort as the result of any outbreak of temper or aggressiveness which may follow or supplement his epileptic attack, the indifference and want of consideration for his desires and comfort which he finds when he gets out into the world, and is thrown on his own resources, naturally excites his resentment, increases his morbid self-consciousness, and prompts him to believe that the people by whom he is surrounded are not only indifferent to his welfare, but actively aggressive in the manifestation of their dislike toward him.

Under these circumstances the uncomfortable feelings which precede or follow his convulsions, the bruises or injuries he may receive in falling, or his failure to accomplish any set purpose, on account of the want of capacity and persistence, are attributed to the attitude of the community toward him, and he is to that extent a paranoiac.

The persistence of this attitude, with outbreaks of violent temper from slight causes, are usually the first evidences of mental reduction. The loss of intellectual capacity may never go any further, although the mental reduction continues.

If the epileptic has shown evidence of mental aberration preceding or following his epilepsy, and especially if the history of the case shows he has been markedly unstable and hysteric as well as epileptic, the mental reduction, to the point where self-control is easily lost, may be followed by outbreaks of excitement, or the development of persecutory ideas with depression, which characterize the insanity of epilepsy.

Again, none of these manifestations may be apparent, but there may be instead automatism, and its persistence in double consciousness; therefore, the medicolegal relations of the epileptic, paradoxical as it may seem, do not concern his epilepsy but rather the conditions associated with it; not necessarily growing out of it, but on the contrary, probably always due to progressive degenerative changes resulting from the primary condition out of which they both grew.

As a consequence, in determining how far the epileptic may be responsible for his acts, we have to consider, not his epilepsy, but the degree of primary defect in his mental make-up, as manifested by his cerebral potentiality and intellectual capacity.

EPILEPSY: ITS TREATMENT, HYGIENIC, MEDICINAL AND SURGICAL.*

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The want of success in the treatment of epilepsy arises from a variety of causes. First, from the speculative character of it, of the pathogenesis of the disease, from the want of careful study of individual cases and the failure to differentiate the various forms, such as the primary essential, the toxic, the traumatic, the accidental, etc., and from the further fact that there is soon established in the epileptic a habit, and this once established is not destroyed by the simple removal of the originating cause of the disease. Not only must the cause be removed, but the habit must be broken up; and then, again, there is present in every epileptic a peculiar mental state characterized by a want of stability, and it is extremely difficult to have him follow any line of treatment long enough and systematically enough to bring about a cure. His tendency is always to fly off at a tangent, reaching out for some kind of treatment that promises more rapid relief.

THE HYGIENE OF THE EPILEPTIC.

The hygienic treatment, so often neglected, is of the greatest importance, and in the primary idiopathic cases it should be disciplinary, pedagogic and dietetic. These patients, who have by inheritance a neurotic diathesis upon which epilepsy has been engrafted, should from the very beginning be taught self-control, restraint of passions and of appetites. They should be obedient, truthful and industrious. They are, as a rule, strongly inclined to indulgence in the stimulating narcotics, tobacco, alcohol and the like. These should be eschewed by them *in toto*. Another point: Their sexual organs are early brought into activity, and they should be warned against the evils of masturbatory and sexual excesses. Their pedagogic training should be carefully directed. As a rule, they do badly in the ordinary pub-

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lic school. Many of them are dullards; others are exceedingly brilliant. The ordinary mental condition is less common. Being liable to fits of ungovernable passion, they are often difficult to control, and constitute in their school discipline a very perplexing problem to the average school teacher. Fortunately, there are today a number of excellent private schools scattered throughout the country where these children can receive the special educational training so necessary for the removal of their abnormal instability. This educational training should include physical culture; indeed, this should be emphasized in every case. Through active muscular exercise they can find an outlet for their surplus nervous energies that otherwise might escape in their peculiar convulsive movements. The muscles concerned in the respiratory act can be developed with great advantage in these cases.

THE DIET.

The dietary in all cases of epilepsy should be arranged with care, and in order to do this each patient must be carefully studied as to his or her digestive capacity. The idea prevails among some that the animal proteids should be entirely cut off. My personal experience is against this conclusion, although I am well satisfied that the consumption of this form of nitrogenous food, as of all nitrogenous foods, should be minimized. But there are very few epileptics who are not really benefited by one meal of meat per day. Epileptics usually have a voracious appetite; they eat their food with rapidity and without proper mastication. This must, of course, be corrected, and from the dietary all indigestible articles, such as pastry, fried foods and coarse vegetables, should be excluded. My experience has taught me that sodium chlorid and sugar should always be minimized. I have no doubt that salt starvation results in a more perfect assimilation of the bromids, for I have conclusively ascertained that most of the bromids will control the paroxysms with the salt practically eliminated, and lessened sugar consumption results in more digestion of the nitrogenous foods. I usually furnish my patients with a diet table, of which the following is a model, striking out or adding to special things as the peculiarities of the case demand.

Breakfast.—Oranges; apples, baked; peaches; oatmeal; cracked wheat; hominy, to be thoroughly cooked and eaten with milk or cream; eggs, soft boiled, poached; toast; bread, white, graham, corn; coffee (moderate strength); milk.

Dinner.—Oysters, raw; soup, bouillon, tomato, vegetable, oyster; chicken or mutton broth; meats, roast beef, roast lamb, roast chicken or turkey; fish, fresh, baked; vegetables, potatoes, spinach, carrots, turnips, onions, string beans, lima beans, peas, squash, asparagus (all to be well cooked); bread, farina, rice, tapioca, cup custard; cheese, Edam, American cream; crackers.

Supper.—Toast; crackers; cornbread; eggs; stewed prunes; baked apples; apple sauce; milk; tea (weak); coffee (weak).

Avoid.—Pastry, cakes, nuts, pork, veal, fried foods. Eat moderately. Masticate thoroughly.

THE MANY DRUGS RECOMMENDED.

The medicinal treatment of epilepsy has a most interesting history. Almost every article in the materia medica, as we have it, or as it was known to the ancients, has been given in this disease, and more or less success reported attending its administration. The epileptic is emotional. He is very susceptible to suggestions, and often by the simplest placebo given with a positive suggestion of relief the paroxysms may be controlled for a variable space of time; and thus credit should be given to anything that might constitute a placebo for the relief of the disease. This peculiarity of susceptibility to suggestions is not only often overlooked in making up an estimate of medicinal agents, but it is certainly frequently overlooked in reporting the results of the various surgical procedures that have been employed. Careful attention to elimination should be the foundation of the treatment of every case. Insufficient renal elimination is not infrequently present. Elimination by the skin must be promoted by the use of baths, hydrotherapy and massage. I have a case under observation now in which very satisfactory results are being obtained. The patient had been treated with the bromids to the extent of saturation, without any results except marked mental impairment. The epileptic seizures continued. A careful study of his case, running through some days, determined the fact that before his paroxysms occurred especially there was insufficient elimination of urinary solids and a very marked defect in the amount of urea. Treatment addressed to this peculiarity of his case, the entire withdrawal of the bromids and the substitution of moderate doses of antipyrin, while it has not cured him, has yet given him the longest interval that he has had in ten years between his paroxysms, and has restored his mental integrity.

Intestinal elimination and intestinal cleanliness are of great importance. We should so regulate the diet as to produce a minimum amount of intestinal fermentation. Of the use of intestinal antiseptics, salol and the new salicylate, aspirin, are probably the best.

The use of lavage and of colonic flushing, thereby cleansing both ends of the chylopoietic viscera, is not to be overlooked in any case, and laxatives, of which the aloetics are my favorites, with occasional doses either of blue mass or calomel, are aids to intestinal elimination and asepsis.

THE AURA.

The next important thing in the matter of treatment is to determine whether or not there be present in a given case an aura. If an aura is present and can be successfully treated, it is a wonderful aid in breaking up the epileptic habit, while the other treatment may be correcting the cause upon which the neurosis depends. For this purpose the nitrite of amyl is the most successful agent, and the pearls of various sizes that are furnished to us by the pharmacist serve the purpose the best; and the amount of nitrite of amyl necessary to break up or prevent a paroxysm in any given case can only be determined by trial. Some aid in this matter is given by the use, where it is practicable, of counter-irritation. If an aura begins in the extremities, counter-irritation of that extremity by the actual cautery or by blisters, or sometimes by the use of some other irritation, is effectual. I had, a few years ago, a patient whose aura began in his hand. He wore around his wrist a bracelet of silk, which was so arranged that on the first approach of the aura it could be quickly tightened, and this suddenly-applied irritation was usually sufficient to prevent the development of the convulsive seizure. Anything that will produce a sufficiently powerful impression upon the sensory end organs of the place from which the aura seems to proceed will sometimes answer the purpose. But the aura should always be inquired into and never overlooked, if present, as an important means by which treatment can be instituted which will prevent the formation of an epileptic habit in recent cases and assist in breaking it up in the chronic cases.

THE USE OF BROMIDS.

I think we are all agreed that the most generally useful remedy for internal use is the bromids. The bromids give relief, more or less, in at least 80 per cent. of the cases. But there is a percentage of cases, certainly not less than 10 per cent., in which my experience teaches me that the bromids not only give no relief, but do damage. In the administration of the bromids in every case great care must be exercised that the dose is such as will not produce mental deterioration, for it is very much better for the average epileptic to have an occasional explosion with mental integrity, than it is to be relieved of all explosive efforts, with mental enfeeblement. The bromid which I prefer is the bromid of sodium. I have failed to see any particular benefit from a combination of the various bromids, and in my clientele I have seen no advantage from the use of bromid of strontium.

The bromid should be administered in some one of the mint waters, changing the vehicle from time to time, in order that distastefulness for the combination may not be established in any case. For children my rule in the administration of the bromids is to give a grain for each year of their age. In adults I rarely exceed twenty grains, three times a day, and in every instance advise that the bromids be taken after eating. In recent cases that have not been under the bromid treatment there may be reason for pushing the bromids to the extent of complete bromism, beginning with twenty grains, three times a day, and each week increasing the dose up to complete saturation. But this condition of things should in no case be maintained except for a short space of time, and, in my judgment, is only applicable to cases in which the disease has just recently developed.

If the dose of bromid that has been specified fails to relieve the patient, I add to the treatment the fluid extract of *Solanum Carolinensis*. It is a synergistic remedy. Beginning with half-teaspoonful doses it may be pushed to two-dram doses, and it will, without any mental deterioration, sometimes relieve the paroxysms. In some cases, especially where there is cardiac enfeeblement, and this is the case with very many epileptics, the fluid extract of *Adonis vernalis,* in from a half to five minim doses, may be added with advantage to this combination, and relief obtained without pushing the bromids beyond the sixty grains per day already indicated. If this combination fails to relieve the patient, and the other important aids to treatment have been carefully attended to, some one of the coal-tar analgesics may be added to the treatment, as acetanalid, phenacetin, antipyrin, and if these several combinations fail to produce the desired result, with the bromid and *Solanum Carolinensis* treatment may be added the use of belladonna, and probably the best way to administer the belladonna is according to the Trousseau method. Trousseau's formula is:

℞. Extracti belladonnæ .....gr. 1/5
Pulv. folia belladonnæ .....gr. 1/5
For one pill.

During the first month the patient takes one of these pills every day, in the morning, if his attacks occur chiefly in the daytime, or in the evening, if they are chiefly nocturnal. One pill is added to the dose every month. The drug should not be pushed beyond excessive dilatation of the pupils, and uncomfortable dryness of the throat. While the patient is under the bromid treatment, attention should be given from time to time to the condition of the blood and the anemia that belongs to the disease naturally, and which is often very much intensified by the use of the bromids, should be combated. The bromid of iron is a very good agent with which to do this, as is also liquor ferri et ammoniæ acetatis, and sometimes the correction of this anemia will make the treatment, otherwise unsuccessful, satisfactory. The anemia of these patients may sometimes also be combated by the use of cod-liver oil. Especially is this true of treatment during the winter months. The alkaline bromids produce, after a time, in some cases an irritable condition of the bladder, then the bromohydric acid should be substituted for a time, or the new combination of bromin with oil of sesame, called bromipin, may be used.

THE TREATMENT WHEN BROMIDS FAIL.

Where the bromid treatment fails, some have had success from adding to it borax in ten-grain doses, three times a day, but my experience with borax has not been very satisfactory. Occasionally, where the bromids fail with the combinations already suggested, the bromids may be continued and the oxid of zinc in from three to five grains may be added to the treatment with benefit. While under this treatment, even where only a small dose of bromid is administered, as I see in my own practice, the patients will, of course, complain very much of the bromid acne. Especially will this be the case with women, and this may sometimes be overcome by the use of preparations of arsenic. If the bromid of sodium is administered, the liquor sodii arsenatis in from three to five minim doses may be put in the prescription already indicated, and arsenic is not only a benefit to them for this reason, but as a tonic alterative to the nervous system it is often of very great service. In epileptics with poor circulation in the extremities, a condition that will be often very much exaggerated by the use of bromids, strychnia will be of service, in from one-sixtieth to the twentieth of a grain, administered three times a day, as a substitute for one of the adjuncts already suggested.

COUNTER-IRRITATION FOR HEADACHE.

In the cases that complain much of headache, as in some cases that do not, cauterization of the neck is of service. Counter-irritation is entirely too much neglected in our present therapeutic methods. Cauterization of the neck may be done by the actual cautery, and sometimes, when the medicinal treatment already indicated fails, the addition of the actual cautery to the neck, two or three times a week, will secure the results desired. Where the use of the actual cautery is not practicable, a silver wire suture inserted into the neck will accomplish the same purpose. In a percentage of cases in which bromids fail or are detrimental, relief may sometimes be had by treating the cases on the Tyrell plan, by giving strychnia in gradually increasing doses. I have had a satisfactory experience quite recently in a case in which abortive epileptic manifestations were occurring almost daily. Under the use of full doses of strychnia, twice a day, he has now had exemption from these attacks for about a year. I began with him with the sixteenth of a grain of strychnia, twice a day, and carried it up to the tenth of a grain, and along with that gave him aloetic laxatives, and with such hygienic and dietetic treatment as were indicated. In this man's case the bromids were positively detrimental.

OTHER DRUGS SOMETIMES VALUABLE.

I have already mentioned a case in which the use of antipyrin, with attention to renal elimination, is producing satisfactory results where the bromids were harmful.

Dr. G. Frank Lydston[1] has reported successful results from the use of santonin, beginning with two-grain doses, three or four times a day, and increasing the amount to the point of tolerance, which, in many cases, is about fifteen grains. A rather limited trial of Dr. Lydston's method indicates that in those cases where the bromids disagree it may be of great service, and a further trial of it is demanded.

The late Dr. Pepper of Philadelphia reported cases in which bromids had disagreed with patients, but which were benefited by the use of sodium salicylate and antipyrin.[2]

The syphilitic cases of epilepsy require, in addition to the moderate use of bromids, the most vigorous administration of the iodids that is compatible with the general nutrition of the patients, together with the hypodermic administration of mercury.

Some of the rebellious cases are benefited by the use of nitroglycerin, using a 1 per cent. alcoholic solution, and giving from two to ten minims morning and evening. Pellegrini has recently published some very satisfactory results from the use of nitroglycerin in these cases.[3]

SURGERY.

Surgical treatment, which offers to relieve primary idiopathic epilepsy by any operative procedure yet suggested, must necessarily always be a failure, and there is nothing whatever in the records of sympathectomy, or in ligation of the vertebrals, or in trephining that will justify us in recommending it in a single case of this sort. The traumatic cases can undoubtedly be benefited, not cured, by operative procedures, provided the epilepsy has not been of too long duration, and too many convulsions resulting. I should place the limit of time at which an operation would be successful at two years, and these traumatic cases that have received surgical attention require none the less the treatment that has been previously indicated for breaking up the habit and against the neurosis. But in all of these surgical procedures, no matter whether they be done for a primary idiopathic case or an acquired case, for reasons already given, temporary success will follow an operation by its inducing temporary inhibition of cortical cells, as has been suggested by Putnam. The literature of the subject is filled with alleged cures of epilepsy that have been affected within a short time after a surgical operation, and I have in my clientage to-day some of these cases of alleged surgical cures, and am treating them with benefit by the hygienic and medicinal treatment already indicated.

TREATMENT OF THE SEIZURE ITSELF.

As to the treatment of the epileptic paroxysm itself, but little need be said. The patient should be placed in the recumbent posture, with the clothes loosened about the neck and body, and efforts made to prevent biting the tongue. If the epileptic status becomes established, chloroform by inhalation and hyoscin hydrobromate by hypodermic injection will give the most prompt relief. An excessive amount of treatment applied to the epileptic attack itself, which we sometimes witness, is worse than useless.

1. Therapeutic Gazette, Feb. 15, 1900.
2. Southern Practitioner, vol. xx, p. 58, 1898.
3. La Riforma Medica, April 8, 1901.

Position of Ulnar Artery.—In making incisions in the wrist and forearm, always ascertain, if possible, whether the ulnar artery, instead of running under the superficial muscles, passes over them, as is frequently enough the case.—*Toledo Med. and Surg. Rep.*

INSTITUTIONS FOR EPILEPTICS.*

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SONYEA, N. Y.

HISTORICAL SUMMARY

As long ago as 500 years before the dawn of the Christian era epilepsy was known and described, but the epileptic as a public charge was completely neglected until the latter part of the seventeenth century, when individual efforts were made in continental Europe to improve his condition, though without any uniform results until about the beginning of the century just passed. In 1846 France took the lead in establishing a small colony for epileptics and other defectives at LaForce, near Bordeau, to be followed by Germany in 1867, when the now celebrated colony at Bielefeld, in the northwestern part of the empire was begun with four patients in one hut, and which is still the leading institution of its kind in the world, now caring for nearly 1,800 sufferers from epilepsy and over 3,000 defectives, including the epileptics, of various other kinds. Next came England in establishing in 1888 the Maghull Home for Epileptics near Liverpool, and later the same country created the very excellent colony at Chalfont St. Peter, some twenty miles from London; while still later the Meath Home at Godalming, in the beautiful country of Surrey, marked the third institution for epileptics in the British Isles, all of them, like their predecessors on the continent, being founded through private generosity.

Just prior to this, in 1887, Peterson discussed the advantages of the public care of epileptics in America on the colony or village plan, drawing his ideas and inspiration from a visit to the colony in Germany, and in 1890 Ohio took the lead over all other American states and founded the Ohio Hospital for Epileptics and the Epileptic Insane at Gallipolis, to be followed four years later by the state of New York, which set about at that time to create the Craig Colony at Sonyea, in Livingston county, the first institution of its kind for epileptics on the western hemisphere. Simultaneously with the movement in New York, Massachusetts and New Jersey took up the question, the former founding the Massachusetts Hospital for Epileptics, at Palmer, the latter the New Jersey Village, at Skillman, some five miles from the university town of Princeton. About the same time Pennsylvania established an epileptic colony and hospital farm at Oakbourne, not far from Philadelphia, and Texas felt a generous desire to join the fast-spreading movement by laying out an epileptic colony covering some 640 acres at Abilene. Other states, the most notable among them being Virginia and Illinois, have made strenuous attempts to take care of epileptics, and so earnest and persistent have been the efforts of Dr. Drewry and his colleagues in Virginia and Miss Lathrop and other members of the Board of Public Charities in Illinois, that it is only a question of time as to when these progressive states will have institutions for epileptics that will rank among the best.

To John Bost, in France, Von Bodelschwind, in Germany, Peterson, Letchworth and Craig, in America, and to the National Society for the Employment of Epileptics in England, belong the credit of taking the lead in

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Frederick Peterson, Richard Dewey and H. A. Tomlinson.

seeking to improve the deplorable condition of this long-neglected class.

IN AID OF THE WORK IN FUTURE.

The great problem of devising and pushing forward a more wide-spread interest and system of state care for epileptics in the United States is a serious one, in which doctors and philanthropists might well labor together in perfect harmony and with unflagging zeal. No other class so strongly demands public aid, and no class has been subjected to such neglect.

Of the forty-five states in the Union, five only have made state provision for epileptics, and these five at the present time are caring for less than 2,000 patients —2,000 out of at least 150,000 scattered throughout the land; hundreds of them unjustly confined in hospitals for the insane; thousands in county poor and almshouses, the victims of neglect, constant suffering and despair; while by far the larger number remain in poverty-stricken homes, the subjects of solicitous and painful care on the part of those who refuse to send a human being, sick in this way, to a poorhouse intended only to give aid to paupers.

To further stimulate the work in this country, the "National Association for the Study of Epilepsy and the Care and Treatment of Epileptics" was organized in 1898 for these purposes: "To promote the general welfare of sufferers from epilepsy; to stimulate the study of the causes and methods of cure of this disease; to assist the various states in America in establishing a uniform system of care for epileptics; to advocate the care of epileptics in institutions designed for their especial needs;" and the transactions of the first annual meeting of this association, recently published, may be of value to those interested in the work, while "The Care and Treatment of Epileptics," by William Pryor Letchworth, LL.D., is a singularly complete treatise of the whole subject at this stage of its development, both here and abroad.

A LITTLE INDEFINITE CONSTRUCTION AT THE OUTSET UNAVOIDABLE.

The history of the building of institutions for the insane will be repeated in a measure in the building of institutions for epileptics. Methods that are satisfactory in every respect will not be adopted at first, for we require experience, and there has been but little opportunity for acquiring any to this time—that is, but little up to within a very few years ago, and we have found that however excellent foreign methods and ideas may be, they need to be remodeled to make them serve the best purpose under American conditions. Whatever mistakes, however, we may make will be in details only, for it has been quite conclusively shown that the colony system of caring for epileptics is correct; and while the work of building for this class is not yet a finished art, I know of no problem in it under present requirements that can not be satisfactorily solved if the opportunity is only given.

SOME KNOWLEDGE OF THE ECCENTRICITIES OF EPILEPSY OF FIRST IMPORTANCE.

Before an architect can successfully plan a house, he must know what it is to be used for, and since the epileptic stands so supremely alone in the form of his affliction and its results, his proper care demands special homes of many kinds. He represents marked differences in age, character and frequency of attacks, race, social status, habits and, what is most important of all, in forms and degrees of unsoundness of mind, and it is his mental condition in the main that fixes the manner in which he should live.

Fully 80 out of every 100 epileptics acquire the disease before they reach the age of 20 years, and affecting the brain, as essential epilepsy in time always does, we must expect some impairment of the mind, either fixed or temporary, slight or profound, in every case in which the disease is genuine. Out of every 100 epileptics studied at random, in institutions and out, 5 to 10 per cent. of them will have sound minds; 15 to 20 per cent. of them will be insane, while the remaining 70 to 80 per cent. will have mental enfeeblement in some degree.

On April 18 last the chief physician of the German colony at Bielefeld made a classification of the 1,771 epileptics under his care for us as follows: Sound minded, 98, or 5 per cent.; weak minded, 1,100, or 62 per cent.; minds diseased, 582, or 33 per cent.; and of the entire number, 800 only have their freedom, while at the Craig Colony the ratio of those kept in isolation to those who have full liberty is much less, because of greater care in selecting new admissions.

To build institutions for the epileptic without remembering that his disease is psychic as well as physical, is to invite serious disaster. The superintendent of the Massachusetts Hospital for Epileptics, in his report for 1901, says: "It is found to be more difficult to deal with epileptics than with the insane. In many ways our class of adult patients possess to a large degree the mental and emotional traits of children." Dr. H. C. Rutter, for many years superintendent of the Ohio institution for epileptics at Gallipolis, says: "While it can not be said that all epileptics are insane, still in a considerable majority of cases the mind is so frequently affected that a limited supervision is absolutely essential to prevent their entire submergence. It must be remembered that epilepsy is not altogether a physical disease; it is psychic also;" and were it necessary I might present facts in plenty to show that we can not afford to neglect the condition of irresponsibility common to epilepsy when we build institutions for them, no matter what may be the type of his disease.

THREE KINDS OF INSTITUTIONS REQUIRED.

To get the best results, epileptics should be cared for in institutions of three kinds: First, hospitals for those that are insane; second, colonies for selected cases only; third, colonies for all cases save the insane. (It is entirely feasible to merge the two kinds of colonies into one, but the results are then less satisfactory than if they are kept separate and distinct.)

The leading features of hospitals for insane epileptics need not differ much from those observed in building for the ordinary insane, although there are some things we ought especially to take into account, and of these classification comes first. No matter if the epileptic is insane, he is an epileptic still, his convulsions do not cease and he is most apt to make trouble during his seizure periods. Already violent to a marked degree, his violence is apt to increase at these times and efficient means are required for his safe keeping until his excessive frenzy passes away. It has been my experience that more durable forms of construction are demanded in the care of some insane epileptics than for the ordinary insane, and while hundreds of cases may be cared for in one building, or in a compact group of buildings, living apartments should be planned to admit of necessary classification. On this point Dr Flood, of the Massachusetts Hospital for Epileptics, says: "I do not believe in putting twenty-five people in one dormitory.

It works much better when we classify them by putting not more than four or five to sleep in one room." Congregate dining rooms for epileptics will not do. I have known a single fit in a dining room that seated 100 to lead to disastrous results through sympathetic shock in causing five or six other seizures in the room in rapid succession.

Some special features, such as broad, rounded corners on all woodwork, the breaking of stairways with two or more landings and the protection of all heating pipes and radiators should be provided for. Two-story buildings are infinitely to be preferred to those that are higher, and there is no objection to having some bedrooms on the first floor.

The problem of night supervision is as important as its solution is difficult, and this applies to epileptics of all kinds. I once saw the experiment made, through necessity, of having twenty-eight epileptics sleep in one large room. This made it easy for the night nurse to detect anything wrong, but in all other ways it could not possibly have been worse. Fits occurred almost hourly, and the noise incident to each seizure wakened all the sleepers, and after this had been done six or eight times in a night the frame of mind the next morning of those who had to endure it can be better imagined than described. In our opinion, it is not possible to devise any sort of night supervision that will entirely do away with the epileptic's liability to accident while he sleeps, unless every room is provided with a nurse in charge. I recall two patients during the past year who died in bed as the result of fits that occurred between the half-hourly visits of the nurse, and we have come to believe that it is much better not to put more than five or six to sleep in one room and run the risk of an occasional accident than to make vast numbers habitually uncomfortable by herding them in huge dormitories in which repeated attacks destroy the comfort of all the rest.

COLONIES FOR SELECTED CASES ONLY.

There are no colonies for selected cases only in this country at present, and because such institutions might seem to be too discriminative in the work they do the state might hesitate to build them. Such colonies have a high value, a value which they can, perhaps, best reach under the stimulus of private benevolence, and there is a splendid opportunity for people of means to take up such work in the United States at this time. There should be such a colony in easy reach of every city in this country having a population of half a million or more. They should not be large—big enough only for 100 to 200 patients; the one great valuable feature about them being individual attention to a class that promises most, under proper care, in the way of improvement or cure, a class that is now submerged in institutions that care for hundreds of cases to whom we can promise but little or nothing for to-morrow.

Colonies like these would bear the same relationship to other colonies or institutions for epileptics that psychopathic hospitals bear to other institutions for the insane. A type of such an institution is to be found in the English colony at Chalfont St. Peter founded by the National Society for the Employment of Epileptics. It has now about 135 patients, and Dr. William Aldren Turner has this to say about the manner of selecting cases: "It has been found advisable to carefully select the colonists from among a large number of applicants. The points to which attention is especially directed by the medical committee are: Has the applicant been unable to obtain employment, or has he been discharged from one or more situations by reason of his fits? Is he capable of work under direction? It has been found necessary to regard as ineligible those who from physical causes are not strong enough to undertake some kind of active work; those who from habitual irritability of temper and eccentricity of disposition would not live in harmony with their fellow inmates or be amenable to the rules and regulations of the institution, and especially those who are imbecile, demented or liable to dangerous impulses. Mere frequency or severity of fits, however, does not disqualify the applicant, provided the mental condition is satisfactory." This process of exclusion, we are told by Dr. Turner, shuts out about 60 per cent. of all who apply, and the work at Chalfont St. Peter has been entirely satisfactory. It seems to me that no finer plan can be devised for the care of epileptics who can do some work under proper supervision than this, and of the plan and probable cost of building and maintaining such colonies we will speak later on.

COLONIES FOR ALL SAVE THE INSANE.

The word "epileptic" conveys to one unfamiliar with the many types, causes and results of the disease but little information we ought to have before we can successfully plan for the epileptic's best care; and the epileptic who voluntarily seeks help of the physician at his office is seldom representative of the class most apt to come under state care, and in taking all epileptics save the insane into one colony many problems will engage our attention. The majority who apply will be mentally defective in some degree, either feeble-minded, or imbeciles, or idiots, while some will be demented and a few will have sound minds; and while we can not sharply separate them into like groups, because the lines of separation are so vague and so constantly shifting, we can approximate the groups fairly well.

In studying how we might best classify 1,200 mixed cases that have been admitted to the Craig colony to this time, we have found it feasible to put them in houses of three kinds. Houses in class one hold from 12 to 16 or 18 patients whose condition is good enough in every respect to enable them to assume the care of the household in all its details, under the general supervision of one competent nurse or employe, the chief duties of the latter being to look after sick patients and to make observations of seizures, to be reported to the physician in charge. Houses in class two should be large enough to accommodate from 25 to 35 persons of the great middle class, and each house should be in charge of two employes, nurse and cook, and the bulk of the colony would be made up of houses of this type. Houses in class three should consist of infirmaries; buildings combining home and hospital, for the use of perpetually bed-ridden, paralytic or otherwise helpless cases. These buildings need not be large at the outset if care is exercised in selection of cases, but they should be so constructed that they might be enlarged in future.

THE WORTH AND QUALITY OF EPILEPTIC LABOR.

In such a colony about 50 per cent. of all admitted can do work of a remunerative kind; about 25 per cent. will be able to do light housework only, and the remainder nothing at all; while the labors of 7 per cent. to 10 per cent. of the entire number will have a value equal to, or greater, than the cost of their support, and we have come to believe that under the best conditions colonies for mixed cases may be able to earn from 25 per cent. to 30 per cent. of the cost of their maintenance, while colonies for selected cases only may reasonably aspire to do about twice as well.

Epileptics can work at almost anything, though some can be employed at occupations that are hazardous with greater safety than others. In seven years at the Craig colony we have never known a serious accident to follow a risk in occupation, and our patients do everything from needlework to house painting and engine driving, though special cases are selected for special work.

Colonies for epileptics should therefore provide the fullest equipment of all industries common to normal communities and should employ skilled artisans to train and supervise epileptic labor, both for economic and therapeutic reasons, but especially for the latter. The epileptic who is idle is badly handicapped in the race for improvement in comparison with the epileptic who is kept at work, and colonies should be kept free from the atmosphere of invalidism.

LOCATION, SIZE, COST AND PLAN OF DEVELOPMENT IN THE CONCRETE.

Location.—In looking for a site it should be announced that gifts of land will not be considered, for when the state accepts such gifts embarrassments are apt to always follow, and in choosing a site two things should be prominently borne in mind: First, the natural advantages of the place, including water, climate, fertility of soil and drainage; second, reasonable proximity to centers of population; but if it is a question as to which should determine the matter, those named first have the greatest weight. It is impossible for a colony to meet with success unless its water supply is pure and abundant; its climate such as to insure the greatest number of pleasant days in which outdoor life is possible with comfort; in which the fertility of the soil under cultivation by epileptic labor insures the largest yield; and in which diseases due to faulty sanitation are lessened by perfect drainage.

Size.—It is difficult to say how large a colony should be, but as a rule an acre to each individual will be none too much. The epileptic's food should come almost exclusively from the farm, dairy and garden, which makes a large amount of fertile land a prime necessity.

Cost.—The cost of a colony equipped for use can now be pretty definitely ascertained before the work of its construction is begun, if the cost of the land only is known. Durable brick and stone houses for patients will cost about $500 per bed, while the cost of furnishing will vary from $30 to $50 per person. About one-half the cost of the colony will be in the houses, the balance in plants to supply heat, light and water, in administrative offices and hospitals, in furnishing, in industrial shops, farm stock and implements, sewerage system, roads, walks, grading and homes for officers and employes. There is no valid objection to building some houses of wood, if they can be made small, properly located and protected against fire, and they can be made ready for occupancy at one-half the cost of brick and stone buildings.

Plan of Development.—So far as possible a definite plan of development should be followed by making a complete topographic map of the land at the outset, always remembering the value of approximating the main features, and we may illustrate the method of doing this by drawing a circle of sufficient diameter and putting in it the office building, the hospital, the power plant, storehouse, laundry, schools, industries and other common necessities, then draw another circle and let that embrace homes for the better classes, and then a third, beyond which home for the poorer types of colonists should not go. By doing this it will be easy to heat, light, furnish with supplies and supervise the entire colony from a central point at less cost than if the essential features were scattered indiscriminately over the entire place. Local conditions may call for some modifications of this, but in the main the principle will be found correct. The exterior design and color of cottages for patients may be all alike, or no two may be the same, the determination of the point resting on individual preference. At Bielefeld and Chalfont St. Peter the buildings all differ; at the Craig colony the two main groups of fifteen to twenty buildings each are almost identical in form and entirely so in color. The cost of maintenance for mixed classes after the population reaches 600 to 700 will be less than for the insane, while colonies for selected cases only should not require more than $75 to $80 a patient a year, and under ideal conditions even less.

Young epileptics, whose minds admit of it, require some education, which needs to be simple, for, as a rule, they are unable to grasp and retain complicated ideas, and it has been our experience that purely intellectual knowledge acquired by them to-day is apt to be lost through the destructive effects of a fit to-morrow; but that when tissue grosser than the brain, like muscle, learns a thing well, that knowledge is not destroyed with each fit; therefore, we have come to believe that the combined use of muscle and brain should be the favored method of educating this class, the value of the former compared with the latter being fully as great as ten to one.

MONEY FOR RESEARCH WORK.

The clinical picture of epilepsy seems complete, but its two most important objects of study have as yet scarcely been touched upon: the morbid psychology and the etiology of this mysterious disease; and such work can best be done in institutions for epileptics, because it is only here that the necessary wealth of material can be found. It is well, however, for us to understand at the outset that such work, to be of value, can not be done without considerable cost, and in states in which expenditures for the maintenance of public charities are already of great magnitude, we ought to try and enlist the aid of private wealth, and I venture to add that the interest on an endowment fund of $100,000 in two or more states to-day would be most valuable gifts for the purpose.

In conclusion, it is unnecessary to add that my aim in this paper has been rather to try and lead into prominence some of the more important principles involved in the institutional care of epileptics, based on the epileptic's condition, than to recite material details that are only of value when the work of construction has commenced; nor to add that the sure test of time has conclusively demonstrated that institutions, especially colonies, for epileptics have so amply justified their creation as to make the establishment of one desirable in every state in the Union. Let us co-operate to help the work along.

DISCUSSION

ON PAPERS OF DRS. PEARCE,* TOMLINSON, BROWER AND SPRATLING.

ETIOLOGY.

DR. J. D. MCCARTHY, Philadelphia—So far as pathogenesis of epilepsy is concerned, I think we could better understand the subject by saying that we do not know anything about it. Several theories have been advanced, but they are purely theoretical in the present status of the anatomy and physiology of the brain. The theory that has been gaining ground in late years of the toxemic process can explain very little of the pathogenesis, if you do not assume the instability of the cor-

* The paper of Dr. Pearce was published elsewhere.

tical cell. Assuming this, it is a theory based on a theory, and so on until you finally arrive at a stage where you reach a conclusion based on several theories. The toxemic theory is probably the theory that best explains the development of the epileptic attack. There again, if you try to explain the individual elements of the attack you assume a former theory, i. e., the vasomotor theory. These theories have been separated by different observers and they all pass one into the other. I think that any one who has much to do with a large number of epileptics can not get away from the fact that whether the attack results from autointoxication of gastrointestinal type, whether it be one of the so-called alcoholic cases, or whether the origin of the condition is unknown, many of these are really of reflex character. The development of the convulsion in these cases is paroxysmal. There is usually before the spasm an instability of the cortex and an instability of the motor mechanism, followed by a discharge of motor energy. This groundwork of these explanations has been given to the profession by Dr. Jackson, who probably understands more about the subject than any other man. This instability, it seems to me, we see especially in the alcoholic cases. There is a certain defective organic development of the cortex, which you can not see microscopically, but there are other evidences of degeneration scattered throughout the brain, owing to its susceptibility to the action of the toxins. You can very easily see how, in a case where the motor mechanism is so finely balanced, it would be easily overthrown. You can easily see how a small amount of alcohol or a small amount of other intoxication could produce an epileptic attack under these conditions. In the cases where the patients will probably have an attack every four or five years these attacks will very often be associated with conditions of autointoxication. The cases resulting from intoxication from alcohol can probably best be explained on this same ground. These cases should be distinguished also from another sort of convulsion which should be differentiated from true essential epilepsy; i. e., cases rather of an organic affection (brain tumor, etc.).

THE MEDICOLEGAL ASPECT.

DR. A. B. RICHARDSON, Washington, D. C.—The mental deficiency or disorder connected with epilepsy or resulting from it may be naturally subdivided into several forms. The first is that congenital defect which shows itself in retarded and imperfect mental development and of which the epileptic attacks are only another expression. In these, while the convulsive seizures may have the effect of increasing the degree of the mental deficiency or disorder, the original defect is, after all, the chief point to be investigated, and this is not materially affected by the epileptic complication. In other words, imbecility without epilepsy and imbecility in which epilepsy develops as a complication, do not very materially differ in their symptomatology so far as the mental deficiency is concerned. The degree of legal responsibility is therefore to be determined in such cases rather by a study of the mental deficiency than by anything peculiar in it traceable to the convulsive attacks.

A second class of cases are those in which the first evidence of disease is the occurrence of epileptic attacks, commencing in the early years of life and apparently largely by their influence on brain nutrition resulting in imperfect mental development and in various degrees of mental disorder. Here the form of the deficiency or disorder is more likely to be influenced by the epilepsy and requires more consideration in this investigation. In such cases the mental disorder is more likely to vary in degree from time to time and to be accompanied by violent outbursts. The epileptic disposition, so marked in its characteristics in many cases of later development, is more noticeable. There is greater irritability, sometimes more extreme dementia, and there is more likely to be present also a greater degree of suspicion. There is, I believe, also more obtunding of the moral sensibilities of the patient. He is more unreasonable and less easily controlled. The influence of the epileptic seizures themselves is more marked, and the mental phenomena are more paroxysmal in character. It becomes necessary not only to consider the permanent imbecility present, but also the kind of variations in the mental state occurring periodically and bearing some sort of relation to the convulsive attacks. They may precede, follow, or take the place of these. There may be several days or weeks of excitement and changed emotional states followed by conditions of greater quiescence and continually increasing mental weakness. In all these cases, however, there can be but little trouble in determining the irresponsibility of the patient. The permanent mental defect makes this evident, and the only question remaining is usually how far the irresponsibility shall be extended in a given case. In the presence of a permanent mental deficiency, any given act should be studied especially in the light of the motives prompting it. It is seldom in such cases that these motives are not influenced by the defective reasoning arising from the permanent deficiency. In the cases where the imbecility is but slightly noticeable the temporary perversions of the state of mind accompanying the epileptic seizures become more important in their medicolegal aspect and call for careful study. In a small percentage of such cases a marked criminal propensity is developed in the child, a vicious disposition or a tendency to injure animals and playmates without any corresponding provocation. Those moral monstrosities arising now and then in a few instances have an epileptic history. I believe these are rare, however, and the rule is that epilepsy, during the developmental period, has a tendency to cause periodical excitement or irritability with outbursts of passion, and in these oftentimes homicidal impulses, but does not develop in the person fixed propensities toward crime. There is usually a gradually progressing dementia, a lessened capacity to reason correctly, greater impulsive tendencies, and often a more marked and more acute state of mental disorder.

The third class of cases are those in whom the mental development is up to the average and where the epilepsy occurs at a later period of life. Here there is great variation in the effect of the disease on the mind functions. As already stated, in a few cases it may exist for years with scarcely any untoward influence. Perhaps closely scrutinized, even in these there will be discovered slight impressions on the disposition of the patient. He is a little more querulous and impatient than formerly and slightly more emotional.

In the large majority of cases the mind functions suffer more decidedly. The destructive change is more marked. There is a gradual dementia, a very noticeable emotional tendency, marked irritability or a disposition to develop unjust suspicions of those about them. It has become almost proverbial with those familiar with such cases to remark on the disagreeable character of the change in disposition developed by the disease.

Epilepsy, which has its origin during the post-developmental period or in the latter years of adolescence, has none of the accompaniments of imbecility as described in those forms we have been considering. There is often a neurosis in the form of a susceptible or unusually unstable nervous system, and this may have shown itself in other forms of nervous disease, such as chorea during childhood, night terrors, somnambulism, delirium from relatively slight causes and irregular convulsive attacks from reflex causes.

In other cases the epilepsy appears with very few or none of these previous manifestations and in persons with apparently stable nervous systems. The extent to which the disease, appearing at these periods of life, results in mental disorder or deterioration, and the character of this deterioration vary greatly in different individuals. There are a few epileptics throughout the country in whom the attacks are only occasional, where its origin is obscure, which sometimes, at least, can only be called idiopathic, where the mental deterioration is scarcely sufficient to be measurable. It may so exist for years, the individual discharging responsible duties in the meantime and with no perceptible change in disposition, or mental capacity, and with no disturbance of the mental equilibrium beyond the temporary unconsciousness of the epileptic attack. How large, or rather how small, a proportion these are of all the cases developing it is difficult to determine. In my opinion they are so few in number as to be considered exceptional. In a considerably larger number of cases so developing there is a general mental depreciation. Increasing

dementia, with more or less well-marked recurrences of periods of excitement, marks the progress of the damage to the brain as the epilepsy continues. These phenomena may be the accompaniment of any of the regular types of the disease, whether the attacks are chiefly of grand mal or petit mal or occur at night or during the day. The rapidity and extent of the mental deterioration does bear some relation to the frequency of the attacks, however, and also to their severity. There is a very strongly marked individuality in this disease as to the character of the mental changes produced by it. Sometimes these are very noticeable preceding, during and following the convulsive attacks, with slight disturbance at other times. In others the attacks are not accompanied by much exaggeration in the mind disorder, but it is constant and progressive at all times.

In the first of these classes, those showing no perceptible mental disorder, while the evidence of occasional epileptic attacks should cause a careful scrutiny of the probable motives resulting in criminal acts, it is exceedingly doubtful whether any great weight should be given to these as a relief from responsibility. The probabilities are that a study of any such case will disclose motives not different from those resulting in criminal acts in others and that the individual is only acting out his normal propensities. In my experience, if such persons were peaceable and law-abiding previous to the appearance of the disease, they continue so, and if possessed of criminal propensities, these are not especially affected by it.

In the other class, those which manifest mental disorder or depreciation, great conservatism should be used in maintaining responsibility before the law. In my view the presence of epilepsy should be held to still further diminish this responsibility over other cases with a like amount of mental depreciation and without the epileptic complication. This is because of its well-known tendency to explosions of violence, its disturbance of consciousness and its effect on the general disposition as displayed in the emotions.

By far the most difficult cases to locate in their medico-legal relations are those more or less irregular forms where the disease is not shown so much by regular convulsive attacks as by what are called psychic equivalents, masked or larvated attacks and periods of unconsciousness or unconscious or subconscious cerebration, without very evident implication of the muscular system. That such cases occur there is no doubt. That this form is more or less allied to true epilepsy I believe to be a fact. That cases of this nature may have very little evidence of mind disorder of a permanent character is also doubtless true. I think it very rarely happens, however, that we should be long at a loss to determine whether a given criminal, or apparently criminal act is or is not the product of such a condition. It is rarely if ever the case that acts in the unconscious state or of unconscious or subconscious cerebration are other than purposeless or such as have ordinary and innocent motives. They very rarely if ever have that method that leads to such criminal acts as would leave a doubt as to their criminal origin. Usually the absence of any adequate and reasonable motive and the incongruous nature of the act as compared with the known character of the individual are sufficient to indicate its origin in disease. It is very dangerous to the safety of the community to concede that such conditions may occur in cases of ordinary epilepsy and result in ordinary criminal acts in persons who might reasonably be supposed not to be above suspicion toward such propensities and in whom no other proof of unconscious states of like character is forthcoming. For instance, a few days ago a case was brought to my attention of a woman arrested for shop-lifting, who had had occasional attacks of epilepsy previously, but in whom the thefts were perpetrated with all the secretiveness and method and with the apparent purpose of the ordinary thief. A few months later she was discovered soliciting men for illicit sexual purpose for mercenary ends, in the ordinary way and in apparently full possession of her consciousness. In each case she pleaded entire unconsciousness of the act, and yet in each she was not above suspicion from formerly manifested characteristics. I can scarcely believe that unconscious states result in criminal acts under such circumstances.

It is true, however, that the presence of epilepsy has a tendency in some few instances to affect chiefly the moral qualities of the individual and to bring about a change in character more or less marked. The morbid character of this change is usually easily determined, however, by comparing the individual with himself at a period before the development of the disease.

Another problem, very difficult of solution in some cases, is to determine the influence of those periodical changes in emotional states that occur in epileptics which in no sense approach automatism and which are not accompanied by subsequent unconsciousness of the events occurring during them. It is well known that many epileptics vary greatly in their emotional states, and that this variation often has a relation to their convulsive attacks. During these periods of more or less emotional excitation the ordinary features of their environment affect them very differently from the influence they have at other times, and the degree of self-control of the patient is often very much lessened during these periods. Much consideration should be given to these variations in determining responsibility for criminal acts, and we will be aided greatly by a study of the history of the patient, for it is well known that while the peculiarities in the manifestation of these states are multitudinous in different cases, they incline to follow the same lines in the same case. If such emotional irritability exists in any instance, sufficient to be considered an excuse from responsibility for acts occurring during it, even when these have sufficient exciting motives, the history will disclose similar conditions previously.

The same is true of the influence of an actual psychic aura in causing apparently criminal acts. These auræ commonly follow certain lines and are prone to be repeated in like form in any given case. Proof ought scarcely ever to be wanting of such phenomena in the history of any case where there is a suspicion that a given act may be the product of such a condition, and in the presence of such auræ in the history of a case we should hesitate to insist on full responsibility.

TREATMENT.

DR. F. SAVARY PEARCE, Philadelphia—I believe thoroughly in antisepsis, intestinal antisepsis in particular, in cases of epilepsy. While we do not know the cause of epilepsy, as has well been said, we certainly do know that it is precipitated by intestinal autointoxication in many instances. I have seen cases in which constipation has undoubtedly been the cause of the patient having his attack of epilepsy. Hence in these epileptic states it is my practice to look to the intestinal tract and to at once administer some drug or other measure which will induce evacuation of the bowel and prevent the condition of constipation and autointoxication. First, then, the disease of the intestine, of course, must be looked into, and it goes without saying that mucous colitis, chronic gastritis and the like must be corrected. Papilloma of the intestine, while it can not be mastered very well, should be treated, if possible, for these growths may produce reflex epilepsy. Rectal irritation is another gastrointestinal symptom that should receive attention, and perhaps surgical correction of fistula in ano may have the effect of removing the cause of the attacks in a minority of symptomatic cases. All the antiseptic measures, such as lavage of the stomach and high enemata or flushing out of the colon, should be employed in these cases. I heartily approve of the use of salol in such patients. A full dose of castor oil occasionally is of value also to unload the bowel.

In reference to diet, I will only state that we should study the individual and see what is best suited as the diet of that particular person. I certainly believe that the proteids should not be withheld as much as they usually are, particularly in anemic patients. I am positive that I have seen patients benefited by the use of good beefsteak properly cooked. In those cases the use of iron would be of value. Predigestives, such as peptoids and the elixir of lactopeptin, are of value in correcting disturbance of the gastrointestinal tract.

Then the reflex causes, I repeat, should be looked to. I have seen a case in which I think phimosis in a boy, which was troubling him, was the cause of the epileptic exacerbations, and the removal of the prolonged prepuce aided in bettering his

condition. So with ovarian disease. So it would be with other reflex causes, such as from neuralgia or deafness. I have seen a woman in which I feel that the deafness was the cause of the epileptoid convulsions; she was getting on past middle life; so that progressive deafness, with sudden tinnitus and vertigo, it would seem to me to be more frequently seen as the exciting cause of epileptoid attacks than we give credit for. The ear should be carefully looked into in any case with vertigo. We all carefully look to the eyes of our patients for reflex causes, I think, and perhaps forget some of the other things that are just as important in producing an attack. Physical and mental work should be very carefully regulated. Certain it is that a great many patients pretend to, and their families try to have them, do the same amount of work that they have been accustomed to do before the development of the disease. The physician should insist on a suitable reduction in the amount of work, according to the state of the disease and the degree of the patient's resistance.

Now, in regard to the use of the bromids; while I use the bromids a great deal, the same as any other physician, I have seen so many untoward results following the administration of these remedies recently in dispensary practice that caution in their use has been indulged. All acnes develop from the excessive use of the bromids, and this is particularly true in regard to such patients as are the subjects of epilepsy who are in a feeble state of circulation. The physician is not always responsible for this, because the patients come to him and obtain a prescription; they get better and go on their way, very often continuing the use of this remedy for years. So that I think that it is important for the physician to urge on the epileptic patient, and especially on the family of the epileptic, that they should not continue the use of the bromids, except under the observation of the family physician. I certainly agree that solanum is a remedy of great value, and bleeding in the epileptic status I have seen do good. Eliminative measures, such as large draughts of water between meals, I have seen do great good. Hydrotherapy, such as hot baths and hot packs, frequently will aid when the patient is having a series of attacks. Elimination by the skin is thus added to bowel and bladder elimination. Castor oil, again I wish to urge, is one of the best drugs that we can use in the intestinal cases for its action on the toxins in the intestinal tract, over and above the cathartic action of the oil already indicated. This drug is therefore given with the idea of producing an antitoxic condition of the intestinal tract and thus neutralizing toxic products that are found there. Dilute nitro-hydrochloric acid is another drug of great value, especially when the patient is bilious. Then the diathesis of the patient must be looked into. If the patient has gout he must be treated for his gout. While I do not mean to say that the gout is the cause of the epilepsy, or that the uric acid diathesis is the cause of an epilepsy, yet these conditions are apt to introduce substances into the blood which cause malnutrition of the brain irritation. So in cases of traumatic epilepsy, the condition is bettered if the nutrition and general condition of the patient is improved.

The prognosis in these cases is very good, particularly if the patient is a child, and provided the treatment is faithfully carried out, especial attention being given to both hygienic and dietetic measures.

I would call your attention to digitalis (gtt. v to x) in combination with the bromids (gr. x to xv) t. i. d. I have seen cases in which the patient had not been getting along in which they did remarkably well on the bromids in association with the tincture of digitalis. It is especially valuable in cases where there is feeble circulation, with lividity of the skin. In some of these severe cases the use of 10 to 20 drops of the tincture of digitalis may have to be used in association with your bromids, and will often correct the difficulty, i. e., the poor circulation together with lessening the attacks. Thus combined with the bromids, then, I feel that digitalis is a valuable adjunct to the treatment of this condition of cardiovascular weakness in the epileptic.

DR. T. D. CROTHERS, Hartford, Conn.—I wish to note a new treatment which appears to be valuable. A year ago I fitted up in my hospital a room with electric lights as an adjunct to the drug treatment. Some months ago an alcoholic epileptic was admitted and has been taking these electric-light baths twice a week ever since, with an entire cessation of the paroxysms and a marked improvement in every particular. Whether this improvement is temporary or permanent one can not say, but it is quite evident that the effect of the electric light on the body, with subsequent massage, has produced a change which is prominent. Has the electric light some specific power to produce a change in the organisms, or is it simply a depurative tonic? Whatever its action may be it is a powerful remedy beyond question or doubt. This patient had been afflicted with epilepsy for four or five years, and had a paroxysm every two or more days. Whether this was due to some constitutional condition or from drug-taking is unknown, but during the last six months there has been an entire cessation of the paroxysms. From the moment he took the first electric-light bath he has improved. This bath is made up of 100 16-candle power electric bulbs. Intense perspiration follows after from six to eight minutes of exposure, then a feeling of stimulation.

NOCTURNAL EPILEPSY.

DR. FRANK P. NORBURY, Jacksonville, Ill.—There has been very little said about nocturnal epilepsy, a condition in which I am greatly interested. I would like very much if some one more experienced than myself would discuss this special feature. For some years past it has been my misfortune, rather than my fortune, to meet a great many cases of nocturnal epilepsy, occurring especially in children during the school year, and more particularly during the latter part of the school year. I am frequently called on to see such cases in consultation. My experience, however, is not limited to children, for I have observed the same phenomena in adults; this past winter I saw two students, grown men, one from a conservatory of music, who only has an attack when under special stress. These attacks always occur at night. The other young man has on an average three a year. He is not himself aware of the occurrence of these attacks, but those near him know of them and report to me. It is especially noticeable that they occur the latter part of the school year. I have also under observation another case, that of a young man who has nocturnal epilepsy, but who is able to work every day; he probably may be off duty for a week out of the year. These attacks come on at irregular intervals; when they do occur he may have three or four attacks within a week. He is able to report for duty every morning. Another case is that of a dry-goods merchant, who in the town in which he lives is not known as epileptic; yet he has an attack on an average about once a week. These attacks do not interfere with his business capacity. Another case is that of a bank clerk, who during the past five or six years has had six or eight attacks of nocturnal epilepsy each year.

In none of these cases have I observed any mental impairment of any consequence. They are all of the same class and the patients are all markedly bright intellectually; the children stand foremost in their classes and are doing good work. This type of the disease seems to me to be a class of cases by itself, and not the ordinary depressing epileptic condition. The patients are all very bright and in good physical condition.

In the treatment of nocturnal epilepsy I have used biborate of sodium in conjunction with the bromids. In all cases I have insisted on thorough elimination by the bowels, using ordinary salts (sulphate of magnesium) daily in the morning before breakfast. This insures a thorough evacuation during the day, which I believe is successful in keeping away autointoxication from this source.

INSTITUTIONS.

DR. JAMES H. ELOYD, Philadelphia—We can only discuss from a very indistinct knowledge this whole subject of the pathology and the so-called pathogenesis of epilepsy. It seems to me that in the whole domain of pathology there is no condition which is so absolutely unknown as the pathogenesis of epilepsy. I do not wish to be pessimistic in discussing this subject, but I should like to call attention to one fact that has been brought out very prominently here to-day, and which I think is the most important thing that has been brought out

in this whole meeting, that, while we are in the dark and the prospects are that we are going to stay in the dark about the true pathology and the true histology and the true pathogenesis of epilepsy, and while we do not know what causes epilepsy, we can at least take care of the epileptic himself; and the paper which was presented here by Dr. Spratling to-day, giving us the details of the work which it is possible for us to do, was, to my mind, an exceedingly valuable one. Coming, as it does, from a man who is right in the midst of this work, that paper is educational. It ought to have great effect and influence in making every man in this Association, when he goes back to his own state, when he goes back to his own hospital, to make him an evangelist in this cause, in starting in every state, not one, but in close proximity to every one of the large cities, several institutions for the care of epileptics. I remember so well when I was at our Blockley Hospital in Philadelphia, the sight of our poor epileptics, sitting there doing nothing day after day, week after week, month after month; sitting there in absolute idleness; as we used sometimes to say, "sitting there doing nothing but waiting for the next fit." The next fit might come this afternoon or it might not come until next week or next month. After it was over it would be just the same thing; they would just simply sit there and wait. There could be nothing more demoralizing, and nothing more absolutely wretched, than the sight of these poor people sitting there with absolutely nothing to do, waiting for the next fit. It seemed to me this was the most forlorn sight in the whole hospital. I used to fear some of them would get flyblown, sitting there without any occupation for either mind or body. And the degeneration which goes on in these epileptics is accentuated by this sort of idle life.

DR. C. H. HUGHES, St. Louis—I have heard no mention made of the epileptic floor, and I would like to suggest a suitable elastic rubber floor for epileptics. I recommended such a floor when I was superintendent of the Missouri State Hospital for Insane. We had about five hundred acres of ground and an epileptic colony then. Of course, we could not get all we wanted, but my plan was to construct a floor in such a way that the epileptic would be protected from falls. We should have the same regard for their condition that we have for the condition of other insane. We should not only protect them during their attacks, but also make the floors elastic and protect the heating apparatus, so that they may be guarded from the effects of such accidents belonging to epileptic seizures.

In regard to nocturnal epilepsy, I think it is the most difficult subject we have to treat. Suggestion has been made here in regard to the use of digitalis. My custom has been to use digitalis and strophanthus and other heart supporters for these patients, and I usually employ the bromid of ammonium instead of the bromids of sodium or potash for such cases. I take a more hopeful view of these epileptic cases than formerly. A large number of these patients have come to me for treatment since I left the Fulton Asylum. What we endeavor to do is to suppress the epilepsy. I expect some day to be able to publish some of my cases. A number of my cases of epilepsy have recovered, and I am not so pessimistic as some of the gentlemen on the subject of epileptic recoveries. The first case of epilepsy that I treated successfully was in 1859. I treated that case successfully with nitrate of silver, and that case has led me to the conviction that toxicity has something to do with exciting the paroxysm. Then there is an epileptic habit governing the neurons that produces proneness to attack of epilepsy, precipitated, I think, by autotoxicity. We should remember these two things in the treatment of epilepsy. Oppenheim has said that syphilis and civilization are the two essential factors in the production of paresis. I believe that the aptitude of the neuron, with the condition of toxicity, are the two essential factors that give us epileptic disease. I believe in the vasomotor theory of the production of the epileptic paroxysm. I believe in the theory of vasomotor spasm and alternate paralysis. I believe, so far as we can determine from the symptomatic condition, that nothing is better demonstrated.

DR. H. A. TOMLINSON, St. Peter, Minn.—According to the statements of some of the speakers we do not know anything about epilepsy, and if this belief is general any attempt on my part to answer Dr. Spratling's question would be futile. However, if I understand Dr. Spratling's point of view, he wants to make a distinction between the so-called psychic epileptic equivalent and what he considers to be a true epilepsy with only psychic manifestations. As stated in my paper, I do not believe in the so-called psychic equivalent. I believe that these states are not the equivalent of the convulsion, but that they are conditions of mental aberration following the disturbance in consciousness, which takes place as the result of an attack of petit mal, and which persists as a mental status.

As to whether there is such a condition as psychic epilepsy depends on the sense in which we use the term. Strictly speaking, I can not imagine a psychic seizure corresponding with the motor seizure. But if we accept the ordinary interpretation of the word epilepsy, I believe we must accept the existence of the condition referred to by Dr. Spratling, in which there is a state of suspension of consciousness with automatic conduct out of accord with the environment of the individual.

DR. W. P. SPRATLING, Sonyea, N. Y.—It is a question to my mind as to how far we should go in trying to differentiate between psychical epilepsy and the so-called psychical epileptic equivalent. Clinically they seem to me to be separate and distinct, while pathologically they probably spring from different parts of the brain. In all probability psychical epilepsy has its origin in the silent or intellectual areas of the brain, its chief peculiarity being that it does not produce muscular commotion of sufficient kind or degree ever to be at all noticeable. On the other hand, the psychical epileptic equivalent may begin in the same silent regions, but it quickly spreads to the motor areas, producing the wildest possible muscular commotion, general in character. If this is true, the two conditions are one and the same thing, differing in degree only, being local in effect in the former and general in the latter. One strong argument in favor of the seat of the discharge being mainly in the intellectual centers in psychical epilepsy is the fact that epileptics of this type oftenest and most severely suffer mental deterioration.

I am confident that the time will come when every state in the Union will have colonies or institutions suitably designed and constructed for the proper care of all grades of epileptics, for it has been amply demonstrated that the colony system of care and treatment is the system superior to all others for this terribly afflicted class.

DR. CHARLES K. MILLS, Philadelphia—I would like to emphasize what Dr. Lloyd has said. The colony method is the method of solving the problem of what to do with the epileptic. As is doubtless known to some of the members of this Section, I was engaged with others in the foundation of the epileptic colony which is located at Oakbourne, Pa. I would like to emphasize what has been said by Dr. Spratling in regard to the establishment of institutions for selected cases. Our Pennsylvania institution is not a state hospital; neither is it for selected cases. It probably comes between the two—the state hospital, which receives cases indiscriminately, and the hospital where cases of a selected kind only are taken. We have been fortunate in that several have given handsomely of their private means for its support.

TREATMENT.

Not much will be accomplished by electric light treatment that has been described. While epilepsy can scarcely be classed with the curable diseases, it is often relieved; the intervals between the paroxysms are often much extended, and what might be termed an approximate cure is effected. The hygienic conditions surrounding the patient should be regulated, and this can best be done on colony farms. The mental and physical habits of the individual should be regulated, and in addition he should be given certain drugs. Usually I employ certain drugs in connection with the bromids. One or two of these have already been mentioned; for instance, it has been my custom for some years past to use conium in conjunction with the bromids and arsenic. I use it either in the form of the juice fluid extract or in the form of coniin hydrobromate. Good results can also sometimes be obtained from the use of

digitalis, strophanthus and cactus in combination with bromids and other drugs. Cod liver oil and other nutrient remedies are also of much service.

DR. J. M. KENISTON, Middletown, Conn.—I would like to describe my experience with the treatment of status epilepticus, which is always an unfortunate and alarming occurrence. Over thirty years ago Kussmaul and Tenner advocated compression of the carotids from all severe seizures, whether singly or in groups. Without regard to the "congestion" theory of epilepsy, there are certainly cases which present long-continued congestion of the vessels of the heart, with marked pulsation in carotids, often visible at a distance of several feet. When this condition of increased blood pressure exists the convulsions are more severe and prolonged, and in such cases I have found great benefit from compression of the carotids against the transverse processes of the cervical vertebræ. The pressure is applied by the thumbs and may be relaxed at the end of two minutes and then resumed. I have successfully treated several cases of status in this way. In cases of status without marked pulsation in the carotids I have had good results from enemata of full doses of chloral, morphin and bromids repeated once or twice at intervals of one to two hours.

DR. WILLIAM H. WALLING, Philadelphia—Six cases successfully treated do not warrant me in saying that there is a cure for epilepsy. I have had good results with galvanism in such cases, passing three to five milliamperes directly through the head for ten to fifteen minutes every other day. The first case when he came to me was having attacks every two weeks; now he has not had an attack for two years. Another case was that of a woman, aged 40, who came to me at a time when she was having attacks every week or every two weeks. That was two years ago, and she has not had an attack since. In this case I used also suggestion with marked benefit.

DR. HAROLD N. MOYER, Chicago—We all recognize that underlying the epileptic constitution is a nutritional disturbance. Two years ago I had under my care an epileptic to whom I had given everything, just as we all do, without success. He was a dispensary patient, one of those for whom so little can be done, because you can not control their habits, and they can only eat what they can buy, and they think it better for their epilepsy to live on the diet that they can afford to buy than to starve to death on the diet that you recommend. I began giving this man glandular extracts. I wrote a prescription first for the suprarenal extract. Although he had been an epileptic for many years the attacks ceased after the administration of the first dose, and during the one and one-half years that have elapsed since there has been no attack. Acting on this experience I have given suprarenal extract, in 5-grain doses, three times a day, to about 25 patients, and three-fourths of them have been benefited. I can not give you any suggestions as to how you might say whether or not a given epileptic is likely to be benefited, but the results reached have been far ahead of any other drug that has come under my observation, and I am going to continue its use. There is a possibility that these glandular extracts may cure a number of cases. With the work of Dr. Ohlmacher on the involvement of the glandular system we are all familiar. The relation of the glandular and lymphatic system would lead one to believe that possibly in the glandular extracts we may have a remedy for a certain number of these cases. Like everything else in these cases, I don't know why it is, but it seems to me that nearly all the remedies benefit the first three or four cases that come to you, and the next dozen people do not seem to get any benefit. I do not know whether it is in the physician or in the patient, but it is generally a fact. Next year, after further study of these glandular extracts, I hope to present the subject again.

In the treatment of epileptic patients I have adopted the following plan: I make my private patients bring me a daily record of their condition; what they eat, how they sleep, bowel conditions, etc.; regarding their mental condition, whether they are irritable, whether they have been depressed and whether they have been troubled. On this daily record is based the treatment. Of those records I construct a chart, which is of the greatest aid in the treatment of epileptics, both in the clinic and in private practice. I just use an ordinary sheet of foolscap paper, turning it on the side and letting each of the lines represent a day of the month, then I draw transverse lines and allow one of these lines to represent a normal condition, then another the psychical state, and so on. By talking to the patients about these different classes of symptoms they begin to recognize the subdivisions themselves and are able to tell you that they have felt irritated, and also in what way their condition has differed from normal. There is no one thing that has helped my work so much as this simple scheme of charting.

DR. AUGUSTUS A. ESHNER, Philadelphia—I think that in accordance with current conceptions epilepsy is to be regarded as a paroxysmal disorder, with a predominance of motor manifestations of a convulsive character and a fairly well-defined symptomatology, recurring with varying frequency and in varying intensity. The convulsion is not the disease; nor does a single seizure necessarily establish the disease. There are other convulsive and paroxysmal disorders. The simplest conception of the underlying condition, it appears to me, is an unstable nervous system on the one hand and one or more of a large number of irritants on the other hand; so that the therapeutic problem that presents itself comprises on the one hand the correction, so far as possible, of the nervous instability, and this I take to be the more important of these two factors, and on the other hand the removal of any or all of the many and varied irritants that may be accessible.

In the papers but little distinction was made between the attacks of major and of minor epilepsy. It seems to me that such a distinction is most important. In my experience, which I take it concurs with the general experience, while one can, as a rule, diminish both the severity and the frequency of the attacks of major epilepsy with bromids, for instance, the same result can not as readily be brought with the minor attacks. In this connection I think it worth while again to emphasize the utility of digitalis in cases of petit mal; this has been referred to, but it seems to me that the matter is important enough to have attention directed to it again. In cases of major epilepsy also I have seen the conjoint administration of tincture of digitalis oftentimes subserve a most useful purpose when the bromids alone proved insufficient. In connection with the question of mixing the bromids, I think it is a matter of common experience that, after one has used for some time any of the drugs that are employed in the treatment of epilepsy the effect seems to diminish and some substitute or alternate becomes necessary, whether a sedative or an intestinal antiseptic or a vasomotor constrictor or dilator or what not. What I mean to say is, to first follow the law's demonstration that, in other words, almost any new remedy seems to have a distinct effect in inhibiting the attacks, at least temporary, and I believe that one may accomplish a useful purpose in a similar manner by alternating the bromids or by combining them. I have found that when a single bromid is no longer efficacious a combination of two or three or four bromids, even without increase in dosage, may subserve a useful purpose.

The cases of petit mal have, in my experience, been most resistant to treatment, as a rule not yielding to bromids. In some of these cases I have seen brilliant results from the administration of digitalis alone, without bromids or other sedative. I have heard no reference in the discussion to the use of chloretone, although it may have been made. In some cases that I have had the opportunity of observing it has seemed to yield good results. The dose preferably should not be large. I would prefer not to give any more than from one to three grains twice or thrice daily. In the case of a child recently under observation the attacks of petit mal, which were repeated many times in the day, at times more than a hundred being counted, subsided entirely for a time when the administration of this drug was begun. The attacks recurred in smaller number shortly afterward, but their frequency was much less than formerly. I have employed sodium biborate in a number of cases of epilepsy, particularly in alternation with the bromids, when these had to be suspended for one reason or another, and have been satisfied with the results. In cases

of nocturnal epilepsy I think it best to administer the bromid in a single large dose at night, instead of distributing the remedy over the day. A source of greatest anxiety is constituted by those patients in whom the attacks occur at long intervals and in whom therefore the seizures can not be anticipated. It is really a serious problem what to do with them, and it would seem that the best thing is to treat them symptomatically; to look after their general condition; to correct gastrointestinal derangement; to prevent or remove irritation from any and all sources. It is in this class of cases, among others, that the best results can be hoped for from institutional treatment, through which patients can be kept under careful observation, useful occupation be provided, and, so far as possible, the attacks anticipated and averted.

At the Infirmary for Nervous Diseases in Philadelphia there has been used for a long time a scheme for recording the number and the character of the attacks, not quite so elaborate as that Dr. Moyer has described, affording a ready means of noting the course of the disease. This consists simply of a chart, with a transverse line for each month in the year, and a series of vertical lines for the month. There is thus provided a square for every day of the year, and in any of these the number of major attacks are indicated by means of small crosses, and the number of minor attacks by means of small dots. Each epileptic is given such a chart, which he brings with him at successive visits. At the close of the year the patient receives a new chart and the old one is made a part of the permanent record of the case.

REPLIES OF THE ESSAYISTS.

DR. TOMLINSON—Before beginning the discussion of that part of the subject included in my paper, I would like to say something with regard to the attitude of those who first discussed the pathology of epilepsy. They were not only agnostic in their attitude toward the pathology of epilepsy, but also pessimistic with regard to its future. It is true, as stated by Gowers, that idiopathic epilepsy has no morbid anatomy nor histology, and from what we know of the disease, its origin and progress, none would be anticipated. But this fact does not deprive us of data on which to base reasonable and rational speculation as to what may be the true pathology of the disease. While it is true that there is no morphologic change in the cortical cells which is incident to epilepsy, it is equally certain that there is no evidence that the morphologic changes found postmortem in other forms of nervous disease are incident thereto. From what we know of the processes of degeneration, they are as likely to be the result. It seems to me that the conclusions from the study of these morbid changes are as much a matter of speculation and hypothesis in one case as in the other, and no better confirmation of this contention is needed than the history of the deductions made from the data of the morphology of nervous disease during the past ten years. So that if there is room for an agnostic attitude toward epilepsy particularly, there is equal room for such an attitude toward the pathology of nervous disease in general. Especially when we take into consideration the fact that every known form or kind of focal or systemic disease of the nervous system may be present in symptomatic form, without any more evidence of lesion than there is in epilepsy. Besides, we have the data supplied us by physiology and general pathology as a basis for our conclusions as to the morbid conditions which give rise to epilepsy and other convulsive disorders, so that they are not merely speculative.

With this general knowledge, supplemented by careful clinical observation of a large number of cases, it seems to me both reasonable and rational to consider that we have in epilepsy the manifestations of a tendency inherent in the individual which results from a defect which is chemical and physical, but not morphologic. Therefore, the unstable mass develops the tendency to respond excessively to slight stimuli, with the resultant explosive activity, usually extreme and followed by unconsciousness.

It does not seem to me difficult to understand why there is first the tonic and then the clonic convulsion in epilepsy. If you will carry out the simple experiment of holding the arm out straight and fully extended for an indefinite time, you will be able to appreciate why a convulsion occurs as it does. After a little time the muscles become tense, the tonus increases and the arm becomes rigid. Later the arm begins to tremble, the muscles twitch; and if the effort is persisted in, the twitching degenerates into a tremor, to be followed by complete relaxation. We have here examples of the tonic and clonic convulsion. The tonic contraction means irritation, the clonic commencing exhaustion. It does not seem to me that speculation of this kind, which is based on known facts in physiology, supplemented by what we know of the processes of development and dissolution, is futile in the study of epilepsy; and this is especially true when we come to consider the subject of treatment. For, after all, we are not treating the epilepsy, but the conditions which give rise to the epilepsy. In order to do this intelligently we must be able to appreciate the significance of these conditions, and the extent to which they are the result of defective development. It is because epilepsy has not been considered in this way that there have been so many vagaries in its treatment, and so much futile surgical interference with conditions which are essentially and necessarily hopeless from the beginning.

There is very little for me to say with regard to my part of the symposium, because my paper was not discussed. It is unfortunate that the terms used to express facts in science do not have the same significance to all who use them, and, in my experience, this laxity of definition is more marked in the terminology of psychiatry than in any other branch of medicine. This confusion is probably largely due to the fact that this terminology has been transferred from the language of metaphysics and the nomenclature is not used etymologically. So much depends on what we mean by the term epilepsy and what we understand by psychic. Then, too, a great deal of the criticism of that part of the symposium which dealt with the pathology of epilepsy, derived its force from the the fact that the speakers used the term pathology as if it was a synonym for morbid histology. In other words, they left us to infer that no disease had a pathology which did not present morphologic change in the structure of the organ apparently involved. The word pathology, properly speaking, means aberration or perversion of function. There may be structural degeneration or disintegration as a result, but it does not follow, if there is not apparent structural change, that there is no pathology.

My part in the symposium, of necessity, had to do almost entirely with deductions which were speculative, but this speculation is only the formulation in orderly sequence of the facts gained from clinical study, postmortem investigation and the comparison of these data with human facts in biology and physiology.

DR. SPRATLING—We have found *Solanum carolinense* (horse nettle berries) valuable in some cases. As with any new drug in the treatment of epilepsy, it is most important to study the case on an individual basis, for a drug that will do good in one will be actually harmful in another.

I believe the term epilepsy is too indiscriminately used; in fact, greatly overworked. Every convulsion is not epileptic, and it is my belief that the time will come when we will quit calling simple convulsions, due to reflex causes, epilepsy. I do not say that such cases may not in time create what we call habit epilepsy, but to my mind it is oftentimes not the genuine disease. I believe that the location, primarily, of genuine epilepsy is in the brain. Some physicians claim that epilepsy is caused by a derangement of the muscular apparatus of the eye, and proceed to cure the disease by clipping the offending muscle. Others claim that nasal adenoids act in the same way and that cures are effected by removing the foreign growths. I think we are still very far at sea in regard to knowing when the word epilepsy should be used. I don't think we should stigmatize people as being epileptics who simply have convulsions.

The causes of epilepsy come under two heads: heredity and stress; the former being similar or dissimilar. In a study of some 1,200 cases admitted to the Craig Colony we found similar heredity to have been the cause of the disease in 16 per cent. of all cases; that is, there was epilepsy in the parents in

these cases. Alcoholism, insanity and tuberculosis comprise the factors of dissimilar heredity; alcoholism in the parent being the cause in 15 per cent.; tuberculosis in 14 per cent., and insanity in 8 per cent. in males and 12 per cent. in females, giving a grand total of over 55 per cent. due to heredity. The causes that come under stress are almost legion and entirely too numerous to call up at this time.

We treat each patient, as far as possible, along four lines: medical, dietetic, surgical and moral, always endeavoring to individualize the treatment as far as possible, and you can never get good results in the treatment of this very obstinate malady until the individual is singled out and treated as well as the disease; and then all forms of treatment must be correct and carried out with the most scrupulous regard to details. Do not rely too much on the bromids; they have some value, it is true; they help some in some cases, but alone I do not believe they have the power to cure. Of late new remedies have come into use, such as bromipin and dormiol, that possess the good features of the bromid salts without any of their bad ones; bromipin, in our opinion, being especially valuable when given in the form of an emulsion.

I have but little to say about the surgical treatment of epilepsy. We have collected the records of scores of cases of operation on the brain, and in none of them have the beneficial effects been permanent. I recall the case of a woman, about 38 years of age, who had an impervious uterus up to the age of 37. She was operated on, the uterus and appendages removed, and she never had a convulsion afterward.

I believe that in every case of genuine epilepsy of any duration the mind is always affected. The institutional treatment of epilepsy is, to my mind, the most valuable method, because it is only by this method that you can absolutely control the patient in all his habits, and you have to do that if you get good results. We should have a record of every attack, with the date and hour that it occurred; of the character of the attack and whether it was followed by loss of consciousness or mental disturbance; how long each stage of the attack lasted, and the point of origin of the convulsions. Our records are complete. While we have not devised a diagram such as Dr. Moyer mentions, I want to speak a word in favor of the Doctor's system of keeping his records. I don't think we ought to be too pessimistic about the pathology of epilepsy. It is only during the past eight or ten years—a brief time in science—that we have been doing work in this direction, and I think there is a great field before us. We ought not to say that nothing can be done for epilepsy, for I know much good can be accomplished.

Dr. Tomlinson spoke about the "epileptic equivalent," and I think the whole thing might be summed up like this: the man who is an epileptic and is in a condition of automatism is not in a condition to receive new impressions; his mind is like a camera plate that has been exposed—it is dead to new impressions. He can only act on impressions, on knowledge previously acquired, but can not receive new ones. This condition is important from the standpoint of medical jurisprudence.

DR. J. H. MCBRIDE, Los Angeles, Cal.—Dr. Spratling said in the early part of his paper that about 8 per cent. of epileptics become insane. In another place I understood him to say that 16 per cent. of genuine epileptics became insane. It would seem, therefore, that much depends on what you include in the term genuine epilepsy. My own experience is that all habitual epileptics suffer some mental deterioration, and while not all of them can properly be called lunatics, neither ought they to be spoken of as sound in mind. We lay too much stress on the fit; the epileptic is usually in a morbid condition in the intervals of the fit.

DR. SPRATLING—I take it that in the first case the epilepsy was due to what we call a distal or reflex cause. The chances of cure in such cases are always better than when the cause is proximal or entirely within the brain. I did not say that 8 per cent. of all epileptics become insane, nor do I regard any epileptics as being perfectly sound in mind; and after that it is only a question of degree. Out of 1,200 cases studied at the Craig Colony 15 to 20 per cent. were found to be subjects for permanent hospital or asylum treatment, while a very much larger per cent. were feeble in mind to some degree.

SYPHILIS OF THE LARYNX.*

CHARLES M. ROBERTSON, A.M., M.D.
CHICAGO.

Syphilis of the larynx is the local manifestation in the larynx of constitutional lues. It is observed in all its different stages and may be either hereditary or acquired. It is classed as (*a*) the primary lesion, (*b*) the secondary, including the erythema, mucous patch and superficial ulcer, and (*c*) the tertiary, including the gumma, deep ulceration, perichondritis and stenosis. It is fortunately quite a rare manifestation in this disease, occurring in 2.9 per cent. of cases as observed by Lewin, 2.4 per cent. by Schrotter, 3.4 per cent. by McKenzie, 2.8 per cent. by Engelsted. These observations are not altogether unanimous, however, as some authors put the per cent. as high as 15. Its occurrence in the pharynx is given by these authors as 10 per cent., and in the nose as 2.8 per cent. The London Throat Hospital reports out of 10,000 cases of this disease, 308 affections of the larynx and 834 of the pharynx. Most of the cases cited were from 30 to 50 years of age. This is probably due to the fact that the individuals are more prone to infection after the age of 20 and seldom after the age of 50. Up to the present time but one instance of primary lesion has been observed, as stated in a case related by Moure,[1] in which he observed a chancre on the free edge of the epiglottis. When the disease is hereditary it occurs either in the early months of life or about adolescence. In the former we have the secondary and in the latter we encounter the tertiary manifestations of the disease.

SYMPTOMS.

There are mild cases who complain only of an inclination to clear the throat, and from this we have all grades of symptoms to severe dysphonia, aphonia or dyspnea, which latter may increase ultimately to such an extent as to require the performance of a tracheotomy. Cough may be present in the early stages, but rare in the latter ones. The vocal function is impaired, and while at the commencement of the attack it amounts only to hoarseness, later it may pass to complete aphonia. Swallowing becomes almost impossible and the absence of pain when not attempting to swallow is most characteristic. The stage of erythema may be confounded with catarrhal laryngitis unless we look for the secondary manifestations accompanying it and the absence of the great amount of pain characterizing the catarrhal laryngitis. Ordinary laryngitis should be considered suspicious, especially if red patches are found on the vocal cords and we are able to elicit a previous syphilitic history. The mucous patch usually occurs on the upper or lingual surface of the epiglottis, more rarely on the aryepiglottic folds or ventricular bands, in the shape of small, usually unilateral ulcerations, which are oval in shape, whitish or yellowish in color, surrounded by an angry red areola. They vary in size from 10 to 15 mm. in diameter. The edges are somewhat elevated, and if the secretion be wiped away the floor of the ulcer is found to be the seat of persistent granulations. It is distinguished from the ulceration of tubercle by being larger in size, unilateral, and surrounded by the areola, while the tubercular ulcers are usually bilateral, are white, with no areola and are from 1 to 3 mm. in diameter, and usually found on the laryngeal surface of the

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

1. "Lecons sur les Maladies du Larynx," Paris, 1890, p. 229.

epiglottis. The superficial ulcer may occur with the mucous patch, or it may appear at any time from the second to the seventh year after the primary lesion by the breaking down of a superficial gummatous infiltration. It is often known as a recurrent ulcerative laryngitis. The subjective symptoms vary as to the site of the ulcer, but neither this nor the mucous patch is found below the true cord.

The tertiary form of this disease is characterized by gumma, deep ulceration and cicatricial contraction. The gummatous infiltration is sometimes seen in the character of a smooth rounded tumor of a yellowish appearance, circumscribed, usually on the edge of the epiglottis, the aryepiglottic folds, the posterior wall of the larynx or the ventricular bands. It has also been observed below the true cord, when it is called subglottic. After a certain period varying in time this gumma breaks down into a deep ulceration, although cases are cited where the tumor has persisted for 20 months without ulceration. When ulceration commences we notice the center of the gumma begins to ulcerate first, the process extending to the periphera until all the gummatous infiltration has disappeared. The appearance of the infiltration is sudden and the ulceration is like rapid in progress.

If there be any doubt as to the diagnosis of the condition present, we can corroborate our opinion in a few days with the administration of large doses of iodids; for there is always a marked improvement after the beginning of this treatment, though it may be transitory. They are distinguished from cancerous growths by the latter being slow to grow and resistant to syphilitic treatment. The deep ulceration is a natural sequence to the gumma and should not be expected before five years after the initial lesion. It is probable that the gumma has broken down before the patient seeks relief, so the first thing we see is the well-developed ulceration. We have a certain amount of local pain, especially on attempting to swallow, a tenderness on pressure. We find abundant mucus secreted containing shreds of necrotic tissue and streaked with blood. Hemorrhage is sometimes so severe as to endanger life from the necrosis of vessel walls, and one or more cases of death have been reported from this cause. Edema is, in some instances, so marked as to interfere with respiration and tracheotomy may be necessary to save the life of the patient. The ulcer in order of frequency is found on the lingual surface of the epiglottis, the true cords, the ventricular bands and the arytenoid space.

When the ulceration occurs near a cartilage such, as for instance, the arytenoid, or cricoid, we have a perichondritis arising which may lead to destruction of the part. Thus Labbé[2] reports a case where the arytenoid of the left side became detached and was inspired, causing death by suffocation.

When the perichondrium becomes affected there is pain, tenderness on pressure, increased impairment of voice and dyspnea. When this process progresses we often find a sequestrum formed which gives rise to a permanent discharge, either into the larynx or to the outside of the neck through a sinus or direct. The sequestrum may lie embedded in the tissues for years, keeping up a discharge indefinitely, or it may apparently heal, to be renewed from time to time, being apparently a relapse or a renewed attack. This process gives rise to the last stage of the disease, stenosis.

After the sloughing has become complete or almost finished, we are confronted with the cicatricial stage, which is by far the most dangerous part of the diseased condition, owing to the great contraction and the danger of the parts being attached to each other, thus causing a closure of the passages. The epiglottis has an unhappy faculty of uniting with the aryepiglottic folds or the side of the pharynx and sometimes to the ventricular bands. The arytenoid articulations are liable to become stiffened or fixed by ankylosis, thus causing the cords to become fixed in their position, which may be in the median line or any other position. We often have a web of tissue formed between the cords, or the laryngeal structures become so distorted as to be hardly recognizable, so great is this process of contraction, and cases are on record where the larynx has been entirely obliterated. In this stage it often becomes necessary to perform tracheotomy, and while the immediate result of the operation is good, it must not be forgotten that these patients are required to wear the canula for the rest of their lives. In most cases the voice is completely and permanently lost. The diagnosis is mostly confused with tubercle and carcinoma.

Syphilis.	Carcinoma.	Tubercle.
Pain usually slight.	Pain constant, lancinating.	Pain severe on deglutition.
Attacks any portion of larynx and ulcerates very rapidly.	Attacks any portion of larynx and ulcerates more slowly than syphilis.	Favorite site is the interarytenoid space or the base of the arytenoid cartilages; ulcerates slowly.
Rarely seen in the stage of induration. First evidence usually a clear-cut, deep ulcer.	First appearance is that of a new growth occupying the laryngeal cavity; no clear-cut ulcer.	Usually the first appearances are small spots of induration which spread rapidly, followed by great edema.
Some induration around the ulcer, but usually very little edema.	The growth fills or encroaches on the laryngeal cavity.	Great edema of the arytenoids.
Ulcer extends deeply, often involving cartilage.	Growth extends in all directions, involving all tissues in its course.	Ulcer extends laterally, but not deeply.
Surface of ulcer covered with muco-purulent secretion and necrotic tissue.	Surface of growth covered by discharge.	Surface of ulcer covered with thick muco-purulent secretion and agglutinated mucus.
Mucous membrane hyperemic and injected.	Mucous membrane hyperemic.	Mucous membrane pale.
Laryngeal stenosis not common till cicatrization occurs.	Laryngeal stenosis common.	Laryngeal stenosis rarely occurs.
General health unimpaired.	Early in the disease no impairment of general health; later a marked cachexia.	Health impaired previous to laryngeal involvement.
Frequently evidences of syphilis in other tissues.	In primary laryngeal carcinoma no other involvement until later in the disease.	Previous and coincident pulmonary trouble common.
Rapidly improves under iodids.	Not influenced by iodids.	Not influenced by iodids.

In syphilis the development of the ulcer is acute, occupying only a few days; in phthisis its development is slow, generally after months of throat symptoms, while in cancer it usually occupies a few weeks in development and the ulcer is preceded by development of a growth and nearly always exhibits round excrescences on or around the ulcer. The ulcer is solitary, irregular in shape and 2 or 3 cm. in diameter. The accompanying table gives the main differences between these diseases.

TREATMENT.

The treatment of the disease is both general and local, and the same laws that apply to its treatment

2. Bull. de la Soc. Anat. de Paris, 1857, vol. xxxii, p. 210.

in other parts of the body are, of course, applicable here. We therefore push the dosage of iodids to their tolerance. If there be any tendency to iodid poisoning a combination with 5 or 10 grain doses of sodium bromid given with each dose will often prevent the rash appearing. It is well to start the iodid in 20-grain doses, increasing it 20 grains every two days, or as rapidly as possible till the tolerance is reached. We often experience patients who will be able to take very large doses who will not stand a smaller one. Thus it is possible to give doses from 100 to 150 grains three times daily. In combination with the iodid treatment we give inunctions of mercury, either in the shape of blue ointment or the oleate, and this is administered by rubbing a dram into different portions of the body daily, each rubbing being preceded and followed by a warm bath. After the fourth dose it is well to discontinue for a day or two on account of the liability of salivating our patient. If the gums are touched at all, which should be avoided. we can administer a few doses of potass. chlorate and use a mouth wash of the same. If it is thought best, tonics can be given with the iodids for the support of the patient and after the process of ulceration is passed we place the patient on a prolonged treatment of mercury, in the shape of the protoiodid or bichlorid, instructing him to continue its use indefinitely.

If the bowel is disturbed by the mercury, the addition of a small dose of opium may be added. A favorite prescription of mine is a combination of mercury, iron and phosphoric acid. This is an alterative tonic and will in no way disturb the patient.

The local treatment consists in keeping the ulcerations clean by the use of detergent lotions, followed by the free use of peroxid, applied on a cotton applicator and the cauterization of the ulcerated spots with a solution of iodin crystals in creosote (saturated solution), or the ulcer may be painted or touched with strong solutions, or the solid stick, of nitrate of silver. If the ulcer shows a tendency to spread fast it may be burned with the galvano-cautery. If we find the ulcer very deep or pieces of tissue loose, we should cut away, or curette the necrotic tissue.

After cicatrization has commenced it is hard to effect much in the way of treatment. Our object in this instance is to prevent as far as possible the occurrence of great stenosis which is so liable to occur, and to be ready at any time to perform tracheotomy, as the contraction may progress so far as to preclude respiration through the natural passage. After we have made a tracheotomy we may try to dilate the larynx with bougies and laryngeal dilators, but as yet we are unable to hold out much in the way of improvement by their use.

DISCUSSION.

DR. L. WEISS, New York—What little I have to say relates more to the palliative features. I had a case a few weeks ago of syphilitic laryngeal stenosis, and the pain the patient had in deglutition was something terrific. I had tried many local applications and finally I came across orthoform and an application of a 5 per cent. solution to the affected larynx acted wonderfully, so soothing that the patient for the next six hours could swallow almost without pain. Orthoform is not as poisonous as cocain so it works in a quite different way. Furthermore, I would emphasize local applications to the throat of unguentum hydrargy. I have used eucain and I found the pain little less, but it does not act as well as does orthoform to alleviate the difficulties of deglutition.

DR. A. RAVOGLI, Cincinnati—A kind of syphilis of the pharynx to which I called attention a few years ago comes in form of round ulcers, sometimes isolated, sometimes multiple on the pharynx, with sharply-defined edges, and a yellow lardaceous bottom. I do not believe these ulcers have to be classified in the tertiary period of syphilis, but I believe they are only in the secondary period. The ulcers come in different parts of the pharynx, sometimes between the end of the pharynx and the beginning of the esophagus. These come on sometimes with an attack of fever, and with a great deal of pain. The patient claims he can not swallow, and on careful examination I have found one or two of these ulcers in the pharynx.

Fig. 1 (Article of Dr. Wallis).

They yield easily to the treatment, which must be general and local; they are healed up in a couple of weeks, and leave only a very superficial scar. I have at present a case in the hospital affected with this kind of ulcer, showing up about fifteen months after infection; this is located just back of the tonsils on the pharynx. The local treatment which gives me the best results has been washing the ulcer with dioxid of hydrogen, and covering the ulcer with iodoform two or three times a day. In ten or twelve days I have obtained the cicatrization of this peculiar kind of ulceration.

THE pain a dentist causes is remembered longer than any suffering he may have prevented.—*Sat. Evening Post.*

WAX MODELS OF UNUSUAL TYPES OF SKIN DISEASES.*

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Instructor in Dermatology in the Philadelphia Polyclinic, and Dermatologist to the Southern Dispensary.
PHILADELPHIA.

Skin affections which deviate from the usual type afford the greatest interest for the dermatologist. These freaks are sooner or later recognized and, by the aid of the sensitized plate, become valuable records. Although the camera is a useful aid in registering these rare conditions, yet it can not always convey to the observer all

Figure 2.

the peculiar details of these exceptional lesions, nor can words sufficiently describe these anomalies.

The nearest approach to the ideal, and that which overcomes the deficiencies of the photograph, is the wax model. It is the truest means of illustrating the morphologic conditions, and with the assistance of pigment the natural colors displayed by the pathologic processes are imitated.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

The models here exhibited are part of a collection made by Dr. Schamberg and the writer from patients attending the Polyclinic Hospital and the Southern Dispensary, Philadelphia. Their descriptions follow:

No. 1 represents a case of dermographism. This phenomenon was evoked by the writing pressure made with the blunt point of an instrument. The patient was the subject of a

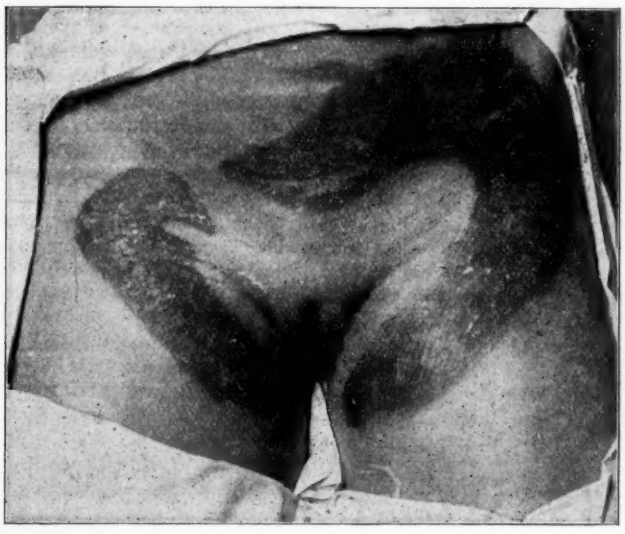

Figure 3.

spontaneous urticaria lasting over a considerable period of time.

No. 2 shows a cutaneous horn on the back of the hand of an aged woman. It has existed about two years. The location has been unfavorable to growth. The lesion when first observed was higher than at the time the impression was

Figure 4.

taken; this modification was the result of treatment. There is slight inflammation at the base due to constant irritation, and some induration suggestive of epitheliomatous change.

No. 3 is an unusual distribution of psoriasis in a little girl, showing a peculiar symmetrical patch involving the inner surface of both thighs and meeting over the pubic and lower abdominal region. The disease had a strong resemblance to a

chronic scaly eczema, and was differentiated therefrom only after close study of the reaction to various remedies and the presence of a psoriatic patch on the scalp.

No. 4 shows an acute granuloma of skin. At the time the impression was taken the disease had progressed four months. The first lesion occurred on the anterior surface of the right leg below the knee; three months later the posterior surface of the same leg, and the anterior aspect of the left leg above the ankle, became likewise affected. The disease began as ecthymatous pustules, but exhibited, after the rupture of the roof, a granulating mass, honey-combed in appearance and studded with numerous small openings exuding a greenish-yellow, slimy pus.

The disease progressed peripherally and in the older lesions displayed a disposition toward involution, but attacking the border with renewed energy. The epidermis was apparently not affected in the disease. The pathologic process undermined the superficial layer of the skin without materially involving it. At the time the case came under observation pustules were forming in the vicinity of the lesions which behaved in a similar manner, eventually coalescing with the older involvements. At the time last observed—one month ago—the process had extended to the greater part of the surface of both legs.

The principal subjective symptom was intense pain, interfering with the patient's sleep. The pain was greatly aggravated by ordinary applications of even moderate strength.

Stained smears suggested short threads or filaments. The cultures from exudate resembled the cultures of actinomycosis. The stained preparation presented branching mycelial filaments, and in old colonies these filaments interlaced until the structure could not be defined except by teasing the specimen. In young colonies the staining of the filaments was uniform, but in older colonies there was segmentation. These preparations resisted acid reagents. No clubs were found, but a suggestion of swelling at the end of filaments occurred. Inoculations are at present not completed.

DISCUSSION.

DR. W. S. GOTTHEIL, New York—Having done work of this kind myself, I am in a position to appreciate the very great amount of patience and skill that is required to make these models. Nothing in the way of a photograph or painting, and still less anything in the way of verbal description, can approach it as a means of recording skin lesions. It is not possible, however, for a practitioner to devote to it the time that is required; and until we have some one like Baretta of Paris here, it can only serve as an occasional means of record in the hands of younger and artistically inclined dermatologists. Years ago, when I made my models, I was invariably asked by some one when exhibiting them what they were worth. I always answered that it was a labor of love, and that hundreds of dollars would not pay me to make one. I am the more sorry to see that some of those here exhibited have been broken in transport, and would suggest that they are entirely too valuable to be carried about.

DR. WALLIS—It was largely through the suggestions of Dr. Schamberg and Dr. Gottheil that this work was undertaken. Dr. Gottheil is one of the pioneers in the work.

Iodin and Gangrene.—The *Indian Medical Record* tells of a patient whose fractured arm was treated by his physician and who was then sent to a hospital to rest for a few days. The hospital surgeon inspected him, insisted that gangrene had set in, and was about to begin an operation on him when the patient's physician arrived with the information that the signs of "gangrene" resulted from the iodin application he had made.

Resolution Against Physicians Bidding Against Each Other.—The following resolution was recently adopted by the Hillsborough (Fla.) County Medical Society: *Resolved*, That it is the sense of the Society that any member who accepts or continues to hold any already accepted contract, to the exclusion of any other physician or physicians, as physician to any society, company or association organized for the express purpose of securing the services of physicians for less than conventional fees, shall be considered guilty of unprofessional and unethical conduct.

GASTROJEJUNOSTOMY WITH THE McGRAW ELASTIC LIGATURE, FOR THE RELIEF OF GASTROPTOSIS.*

H. O. WALKER, M.D.
DETROIT.

If, as Meinert asserts, 90 per cent. of all women have gastroptosis, and knowing as we do the inefficiency of mechanical and medicinal treatment of this distressing malady in a great number of cases, one may be pardoned for presenting a method that offers features of benefit, whether it is mechanical, medicinal or surgical.

Surgically, little has been done, and that but recently, in the way of improvement of this condition. Gastroplication and gastrorrhaphy are the principal procedures, and have not been attended with very brilliant results, as they do not always relieve the chronic pyloric kinking, and although I may not be presenting anything new, yet, as far as I know, except by allusion, nothing has been presented along the lines that I offer. With this brief introduction I beg leave to make a somewhat detailed report of three cases in which a gastrojejunostomy was done for the relief of a chronic invalidism due to gastroptosis.

CASE 1.—Miss A., aged 24, music teacher, was sent to me by Dr. Henry, Northville, Mich., and admitted to Harper Hospital Oct. 21, 1901, with a previous history of having had a fall when 7 years of age, causing a left inguinal hernia. For the last ten years she has had a variety of abdominal disturbances referable to the pelvic region, accompanied with disturbances of the stomach, such as distress after eating, with eructations of large quantities of gas, occasional vomiting and chronic constipation. Within the last three years she has had attacks of pain in the right iliac region, and about three months ago had an attack that was quite severe, confining her to bed for about a week, accompanied with vomiting and elevation of temperature. This point has been quite sensitive ever since. She has had a chronic leucorrheal discharge for several years, also hemorrhoids, and a sensitive left ovary. In fact, she has been in a state of chronic invalidism for years.

Examination.—A reducible left inguinal hernia was quite in evidence. A sensitive appendiceal area, a retroverted uterus, with chronic endometritis, internal hemorrhoids and a prolapsed, sensitive, cystic ovary were found. These conditions in themselves were sufficient to produce stomach trouble, so that as careful examination as should have been made of the stomach conditions was not done.

First Operation.—Oct. 22, 1901, after due preparation, I first did a curettement; then a herniotomy, following with a median section, removing the cystic ovary and the appendix, which showed evidences of chronic infection, and, lastly, the removal of the hemorrhoids. The temperature never exceeded 100, and after three days it dropped to normal, and she made a good recovery from these operations.

Subsequent History.—Her stomach trouble, however, did not improve, and a more careful examination was made, which, with the symptomatology, showed irregular attacks of distention, gastralgia, eructations, nausea and vomiting, with the persistent, typical constipation of gastroptosis. Palpation and percussion gave a succussion or swashing sound of a large quantity of fluid in the stomach, and its lower border could be mapped out below the umbilicus. At times considerable pain was referable to the gall-bladder area. There had, however, never been any jaundice; right nephroptosis was slight, stomach analysis, after a test breakfast, showed total acidity of .35 per cent., mostly lactic acid, with free HCl .12775 per cent.; undigested starch granules and a large amount of mucus.

Second Operation.—After explaining to her the advisability of another operation, she consented, and after due preparation I operated Nov. 29, 1901, opening the abdomen from just

* Read at the twenty-eighth annual meeting of the Mississippi Valley Medical Association, held at Kansas City, Oct. 15-17, 1902.

below the ensiform tip down to about five inches. No evidences of gall-bladder adhesions, constriction or thickening of the pylorus were apparent. The lower border of the stomach extended about two inches below the umbilicus, so that the pancreas was observable above the lesser curvature of the stomach as she lay on the table. On drawing out the stomach the transverse colon was down below that point, as well as a general enteroptosis.

My experience in gastroplication and gastrorrhaphy, in the few cases on which I have operated, has been far from satisfactory, and I conceived the idea that a direct opening from the stomach into the intestine would be better than an attempt to relieve the pyloric kinking by lessening the size of the stomach, or fixing it high up to the abdominal wall inside. I therefore concluded to do a gastrojejunostomy by using the McGraw elastic ligature, in which the various steps of the method are shown in the illustrations that I herewith present.

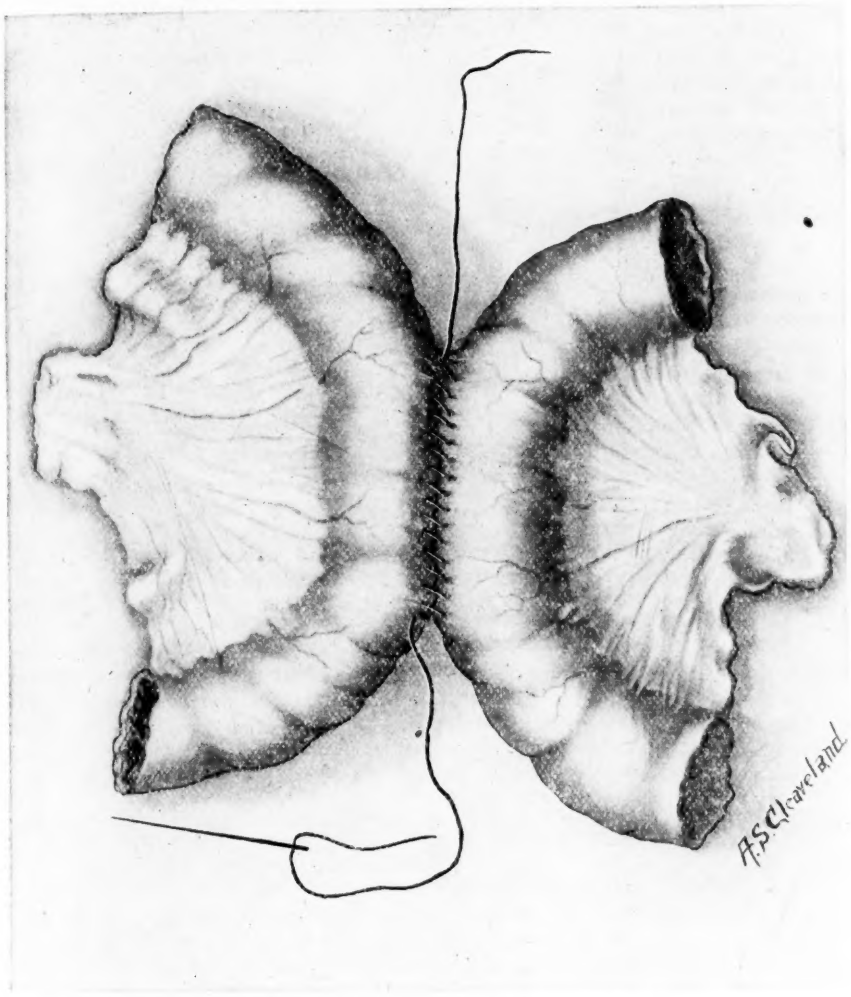

Fig. 1.—Approximation of serosa with continuous silk suture.

Fig. 1 shows the approximation of the serosa by continuous silk suture. Fig. 2 shows the elastic ligature introduced. Fig. 3 shows one tie of the elastic ligature, with strong silk ligature underneath, ready to fasten the elastic ligature when it is drawn taut. As a matter of safety, before cutting off the ligatures, it is well to make another tie of each ligature. Fig. 4 shows the ligature tied; while Fig. 5 shows the operation complete with a continuous suture of the serosa entirely covering the knot. It is my custom in introducing the needle to take up full two and a half inches in the bite of both the stomach and intestines, thereby giving a large anastomotic opening.

This method was followed with this patient. I fed her mostly by the rectum for five days with beef and saline enemata every four hours, with occasional sips of water by the mouth. From this time on she was gradually fed by the mouth, taking solid food on the eleventh day. Her recovery was complete from the operation, and she left the hospital on the twenty-third day thereafter. I have seen and heard from her several times since, and she informs me that she rarely knows that she has a stomach.

CASE 2.—Miss M. P., aged 28, gives a family history of her father dying at the age of 48 from an accident; mother died at 33 after a long history of ill health. Her brothers and sisters, seven in number, are in good health. She has done housework ever since she was 14. At 6 she fell into a well, sustaining severe injuries, from which she apparently made a good recovery. At 15 she had facial paralysis; malarial fever twice, at the ages of 17 and 19, and a broken ankle at 20. In 1893 she had had her first attack of appendicitis, which was followed by recurrent attacks, when, in March, 1897, she was operated on during a severe attack, and the appendix removed, followed by recovery from the operation. Since 1890 she has had attacks of what she called indigestion or dyspepsia, with gas eructations, and pain referable to the liver and stomach, with more or less bloating. Her menstrual periods have been more or less painful. In 1898 she had what her physicians called nervous prostration, followed by acute articular rheumatism.

Examination.—In February, 1901, she consulted me for the first time since I had operated on her for appendicitis for pain over the region of the stomach and gall bladder, which had become unbearable, whether she had eaten moderately or not. She wondered whether an operation might be of benefit to her, and she expressed her willingness to undergo one if she could get relief. At this time her weight was much below normal. She had an anxious expression and was somewhat jaundiced. This jaundiced appearance had been noticed at intervals for some time. She had become habitually constipated; her tongue was coated, and there was constant eructation of gas. Inspection showed general tympany of abdomen, while palpation evinced pain referable to the stomach, but more particularly to the gall bladder. Percussion revealed a succussion sound over the region of the stomach extending to nearly the umbilicus. While it was apparent that she had gastroptosis, yet the preponderance of opinion was in favor of a gall-bladder lesion, in all probability calculi, with adhesions from previous attacks of cholecystitis.

First Operation.—Feb. 7, 1901, I operated on her, making a median incision, and the only lesion, aside from gastroptosis, that could be observed was a band extending from the gall bladder to the pyloric end of the stomach. This was relieved. The stomach could be readily brought out through the abdominal opening, and the lower border of the stomach extended below the umbilicus. Gastrectasia was not well marked, neither was there any thickening or apparent constriction of the pyloric orifice. Gastroplication did not seem to be indicated in this case, so I attempted fixation of the lower curvature of the stomach with several interrupted sutures to the ab-

dominal parietes on a line about two inches below the ensiform cartilage.

Subsequent History.—There were no untoward symptoms following the operation, and she seemed better for a while, but soon her condition became gradually worse, and continued so for more than a year, when she came to me again. I sent her to the Harper Hospital, with a view to attempting further surgical effort for her relief. At this time her pulse was 100, temperature 99, respirations normal, except for a slight bronchial irritation; appetite poor; bowels acting every day, with an occasional diarrhea; pain, especially when lying down, with nausea. She is very nervous.

On April 11, 1902, she was given a test breakfast, which was withdrawn one hour later; amount, 180 c.c.; reaction acid; undigested food from the previous meal; some mucus; total acidity, 0.225 per cent.; free HCl none. Lactic acid present.

Second Operation.—April 12 an incision was made in the same line as before. The previous fixation was satisfactory, except that it failed to accomplish the object for which it was intended, for the upper part of the stomach had rolled down and behind, making matters worse than before. I found (a statement which I neglected to make at the previous operation) a ptosis both of the liver and right kidney, together with general enteroptosis, which, however, was not marked. I first peeled off the attachments that I had previously made, so as to cause a perfect freeing of the stomach, then did an anterior gastrojejunostomy with the McGraw elastic ligature after the manner indicated in the report of Case 1.

Subsequent History.—The first three weeks of convalescence were satisfactory, as she did not complain of any of the old symptoms, but in the fourth week she began vomiting, which was preceded by pain in the back and right side, with an obstinate constipation. Vomiting became frequent and distressing. The symptoms pointed to partial intestinal obstruction or possibly a vicious circle, yet she did not vomit bile, but what seemed to be merely stomach contents from what she had eaten and drunk. The obstruction appeared rather to the left and above the point of anastomosis, or I could map out here an irregular intestinal outline.

Third Operation.—May 30, 1902, her abdomen was again opened, and extensive adhesions liberated. The intestine had assumed a horseshoe shape, and had become adherent on itself. The adhesions were freely relieved, and after satisfactory hemostasis I powdered the whole surface with aristol, as recommended by Morris, with a view of preventing their recurrence.

Subsequent History.—There was no vomiting for two weeks, when the situation became as before, with a return of the obstinate constipation, calling for vigorous catharsis and copious enemata. The abdominal distention and pain were unbearable, necessitating hypodermics of morphin.

Fourth Operation.—Having observed the reports by my friend Morris and others of the value of the Cargile membrane in preventing adhesions, I made another effort, July 26, to relieve her by using nearly a whole package containing twelve sheets of the membrane.

Subsequent History.—The adhesions were more marked than at the last operation, and after two weeks of comparative comfort the symptoms returned, with greater severity than before. Feeling through my efforts to relieve my patient that I had probably made her worse than she would have been, I felt that she demanded at my hands a further effort.

Fifth Operation.—So, on Aug. 29, 1902, I did what probably should have been done before, namely, made an enterostomy, using the McGraw ligature for the purpose. The point of anastomosis was made between the intestine, about eight inches below the gastrojejunostomy. It goes without saying that the adhesions were more extensive than at any previous time. The Cargile membrane had not been absorbed, but was firmly embedded in the cicatricial adhesions. I then, again, made a liberal peeling of all adhesions, and after causing hemostasis as much as possible, I filled the abdominal cavity to distention with normal salt solution, closing the abdominal wound with interrupted silkworm-gut sutures.

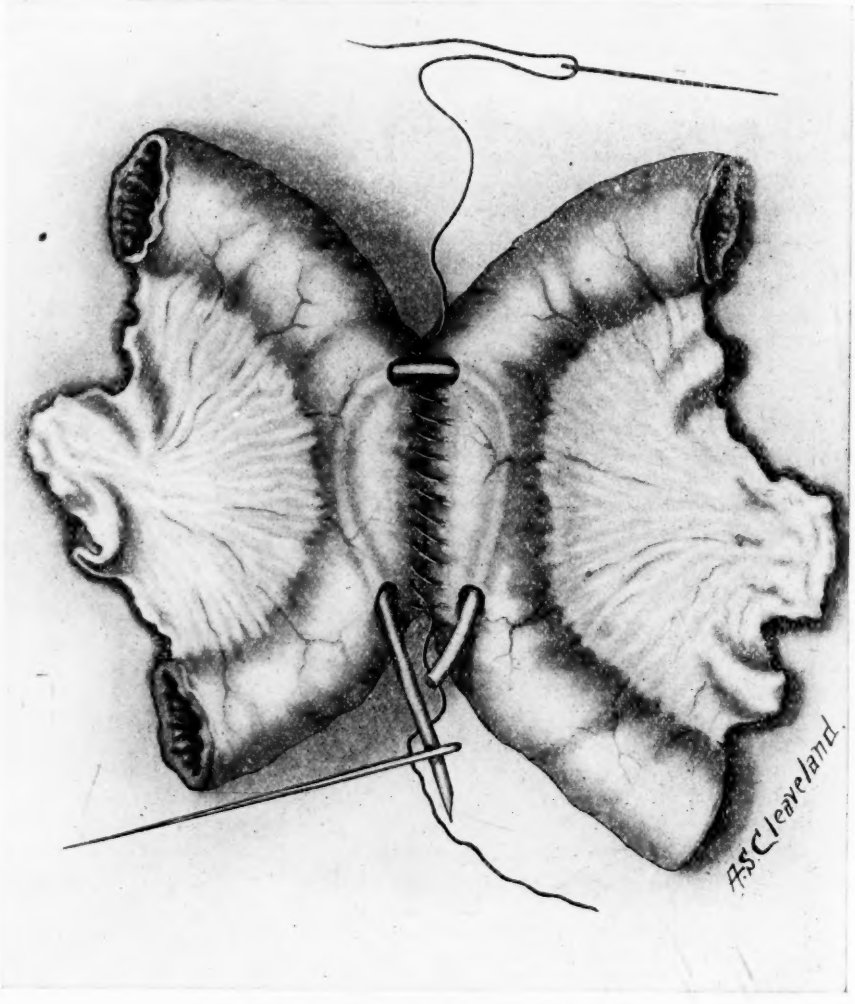

Fig. 2.—Elastic ligature introduced.

The Cure.—September 1 the vomiting had entirely ceased, and has not recurred. She eats anything and everything without any discomfort; she has daily natural evacuations of the bowels; in fact, she did not have an untoward symptom, and on Oct. 7, 1902, she called to see me at my office, presenting a perfect picture of health, to bid me good-bye, as she was about to leave for her home in Ontario.

CASE 3.—Mrs. K., aged 42, was brought to me by Dr. C. F. McDonald of Goodrich, Mich., with a history as follows, which he kindly furnished:

She was married twice, at the ages of 15 and 30 respectively, and was never pregnant. Her condition of health previous to four years ago was fairly good, except at irregular intervals. For eight years preceding 1898 she had distress in the region of the gall bladder and over the stomach. In 1898 these symptoms increased, pain radiating from the

ensiform cartilage in front to the right of the scapula behind and through the thorax. The pain was very severe and accompanied by chilly sensations, nausea, eventuating in vomiting, which was followed by immediate relief for a time. The vomitus consisted mostly of mucus and of whatever food was in the stomach, with bile at times. During these attacks there was never any elevation of temperature or undue circulatory disturbance. With these so-called attacks of indigestion there would be sometimes slight icterus and mental depression. One of these attacks lasted six weeks, followed with marked loss of flesh and strength. Following this severe attack she was fairly comfortable for nearly two years, although rarely a week passed without a reminder by uneasy stomachic sensations. About a year ago she had an attack that was more severe and prolonged than that of 1898. The interval symptoms continued until six weeks ago, when she had another severe attack. Medication and change of climate availed nothing. Dr. McDonald recommended an operation, with the expectation of finding gall-bladder trouble. Certainly the history pointed in that direction, yet with past experience I could easily make out gastroptosis, with characteristic swashing sound on palpation. In this instance no examination of the stomach contents was made, owing to a misunderstanding of instructions for preparations.

Operation.—The history of a gall-bladder lesion was so plain that I could not question its existence, yet on opening the abdomen there was no evidence whatever that it had ever been affected. The sagging of the stomach was very marked, for on withdrawing it and placing it on hot towels on the abdominal wall it easily extended to three inches below the umbilicus. The pyloric orifice was slightly lessened in size and thickened, due entirely to its long-continued kinking caused by the dragging of the stomach. There was ptosis of the liver, right kidney, colon and intestines generally. April 23, 1902, at the Harper Hospital, I did a gastrojejunostomy with the McGraw elastic ligature, in the manner heretofore described. This woman made a rather phenomenal recovery, in that she left the hospital on the fourteenth day after the operation. Dr. McDonald states that since her return home she has had none of the old symptoms; she has increased in weight, and appears perfectly well.

It must be apparent, except possibly in Case 2, where the band of adhesions was found, that the gall-bladder symptoms in all of these cases can only be ascribed to the dragging weight of the fluid-distended stomach.

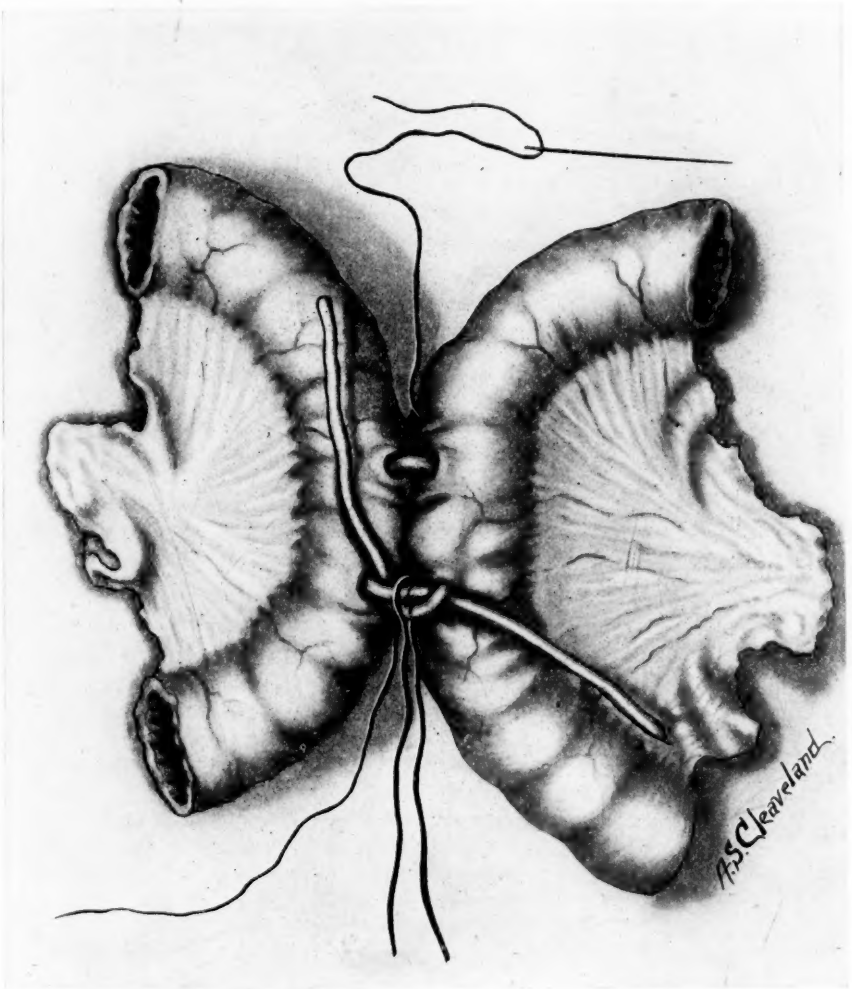

Fig. 3.—One tie of the elastic ligature with a strong silk ligature underneath ready to fasten the elastic ligature where it is drawn taut.

In making gastrojejunostomy I resort to the anterior method, selecting a point in the intestine for attachment to the stomach fully twenty-four inches from the pyloric orifice, there being less possibility at this distance of causing a vicious circle. The symptoms of obstruction that occurred in Case 2 were entirely due to adhesions of the intestine to the anterior abdominal wall, and not a true vicious circle; yet as a means of prevention of this possible contingency it would be well to do an anastomotic enterectomy six or eight inches below the gastrojejunostomy. This was done in my last case, which I operated on three or four days before I left home, and the outcome of the operation I have not yet learned.

Of all the methods that have been suggested for the performance of lateral intestinal anastomosis, with most of which I have had a liberal experience, none, to my mind, possesses the advantages of the McGraw elastic ligature.

1. Its simplicity, which is far greater than any other method yet presented.
2. Ease and rapidity with which it can be done.
3. Less liability to sepsis than by any other method.
4. No danger of a foreign body.
5. A larger opening can be made without liability to cicatricial contraction.

In Case 2, where I had the opportunity of opening the abdomen three times after the gastrojejunostomy, I found the opening very large, with no tendency whatever to contraction. Although my experience with gastrojejunostomy for the relief of the distressing symptoms of gastroptosis is limited, yet the results thus far obtained are certainly encouraging enough to warrant further effort in this direction.

Orthoform in Differentiation of Painful Gastric Affections.—Orthoform has no effect on sound epithelium. Consequently, when it is taken into the stomach, if the epithelium lining is intact, it will have no analgesic action and the pains will continue as before. But if there is an ulcer or ulcerating cancer, the orthoform makes its action soon felt in the reduction of the pains.—Quoted in *Gaz. Med. Belge.*

THE MORTALITY FOLLOWING OPERATIONS FOR PUS IN THE PELVIS.

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In the course of his everyday reading, as well as in his own operative work, the busy surgeon is always meeting with new data, so that at the end of a certain time he finds his mind loaded up with a mass of undigested knowledge, much of which is of no practical utility, or even apparently contradictory. Under these circumstances he finds it necessary to pass in review from time to time all these accumulated ideas, and to sift out the chaff from the wheat so that he can once more start with a clear field and find himself in a position to answer the questions: 1. What have I learned lately which I can utilize in improving my surgical judgment? 2. What omissions from or additions to my operative technic will give me better results in the future? Probably the most satisfactory way by which he can attain this end is to make a careful classification of all his cases and as soon as he finds himself in possession of a sufficiently comprehensive series exemplifying a given pathologic condition to make a careful analysis of all the cases, and from the various data thus obtained to draw any conclusions that seem to be warranted, discarding what has proved to be worthless, and reserving for further consideration any points which may still be doubtful. It goes without saying that deductions based on a few isolated cases would be worse than useless and might be altogether misleading, and that the series should present instances of approximately all the various complications which may be met with in this particular class of operative cases.

During the past three years we have had in our clinic two series of unselected abdominal sections without a death. In the first there were 114 and in the second 108 cases. In the two together we encountered practically all the usual forms of pelvic lesions that occur in the female generative organs. From these cases, together with some prior and other subsequent instances, we have been able to make up a series of 100 consecutive abdominal operations for pus in the pelvis with two deaths. An analytical report of 72 of these cases has already appeared in a paper read before the American Gynecological Society in Chicago, May 30, 1901. Since the date of this publication we have had 28 additional instances. To-day I will briefly consider some of the bacteriologic questions connected with such pus cases, together with some points in the operative technic.

So far as I can gather from my reading, many surgeons would appear to still hold to the belief that the finding of pus in the Fallopian tubes and ovaries in a given case affords sufficient ground for assuming that the patient's chances of recovery following radical operative procedures are necessarily bad. So gloomy a prognosis, I feel sure, when based on the presence of pus *per se*, is by no means always warranted, and the general condition of the patient, as well as her capacity or inability to react after the shock of a severe surgical operation, are often of paramount importance. This is liable to be the case more particularly when dense adhesions have to be separated. Again, when pus is already present, not a few operators appear to assume that the carrying out of an aseptic technic, so far as they themselves are concerned, becomes no longer necessary, and when a fatal result follows an operation under these conditions or when the abdominal wound subsequently becomes infected, they are too apt to content themselves with the explanation that infective material was already present and its spread was only a natural result. Against such conclusions, however, we have the evidence of repeated bacteriologic examinations to prove that the pus found under such circumstances seldom contains living organisms. This observation has been demonstrated in my clinic in a large number of instances, in which no growths were obtained on the culture media, and the fact that the micro-organisms are dead undoubtedly plays a large part in contributing to the favorable results which often follow operative procedures. There is another point of interest connected with the treatment

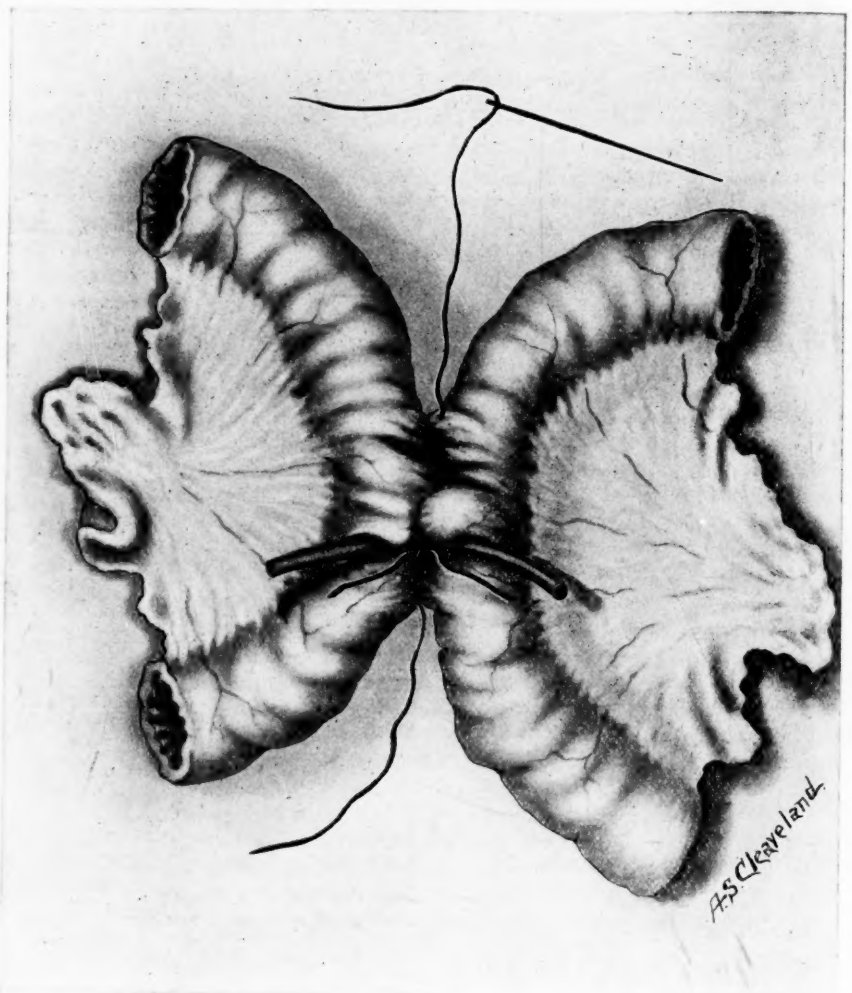


Fig. 4.—Ligature tied. (Article of Dr. Walker.)

advisable in these cases, namely, the influence of the employment of palliative measures to the acute stages of purulent invasions of the Fallopian tubes and ovaries. I have long been convinced that it is an unwise routine to proceed at once to radical steps during an acute attack of pelvic abscess. Even if the patient does not improve somewhat in a short time under general hygienic measures and external applications together with the exhibition of suitable drugs, by simply opening up the cul-de-sac, in the great majority of instances the pus can be given an outlet through this channel, and the absorption of the toxic substances present in the pelvis can be diminished so that as a result the patient's condition will generally become better. She will then be able to withstand the shock if it should later become necessary to institute radical abdominal measures for the removal of the pus-sac contents. After having tried this plan of treatment in a considerable number of cases, and comparing the results with those following immediate radical operative procedures during the acute stage of pelvic abscess, I have become convinced of the great advantages of the former method in the majority of instances.

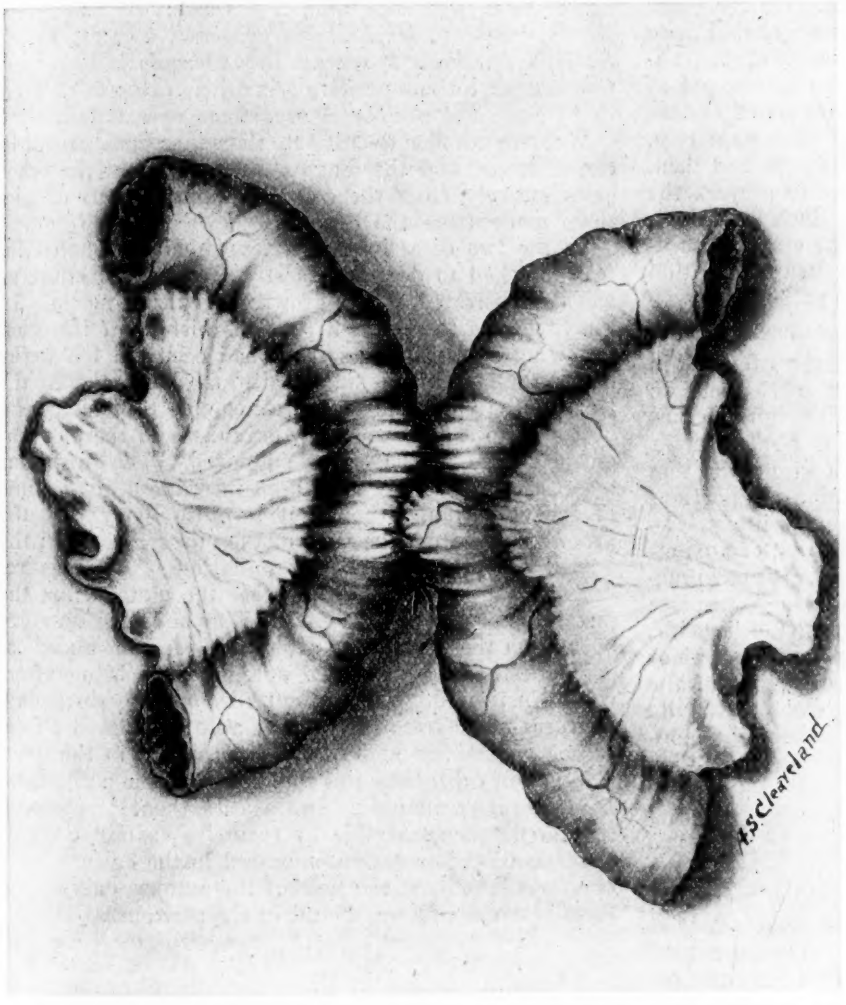


Fig. 5.—Operation complete, continuous suture entirely covering knot. (Article of Dr. Walker.)

The micro-organisms that are most frequently met with in cases of suppurative disease of the Fallopian tubes and ovaries are *Staphylococcus pyogenes aureus, Streptococcus pyogenes, Gonococcus* and *B. coli.* Other forms are occasionally met with, such as *B. tuberculosis,*[1] *Proteus zenkeri.* Of these organisms the one which is the most to be feared is undoubtedly *Streptococcus pyogenes.* But although its presence always makes the prognosis grave, it must be borne in mind that there are many instances on record in which this organism has been found during abdominal operations, and yet the patient has recovered. This favorable outcome is to be explained by the wide range of virulence possessed by *Streptococcus pyogenes.* In my experience a fatal peritonitis has sometimes followed operative procedures in which there were no macroscopic evidences of pus at the time of the operation, and I am inclined to believe that in such cases, with adherent lateral structures, the prognosis is often worse than when a considerable quantity of pus is met with. For this reason, and also because one can never be absolutely sure that the organism may not be very virulent, I have for a long time followed the rule of not performing more than one abdominal section on the same day, preferring to have more frequent sessions rather than to run risks. Whenever I find pus I always postpone carrying out any further abdominal work, except in emergencies, until 48 hours have elapsed.

Drainage.—The question of drainage in pus cases is always of great interest, and all operators are by no means in agreement as to its advantages and disadvantages. In my clinic we have not used a drainage tube during the past seven years, and we now, even in pus cases, seldom drain through the abdominal incision. When should we and when should we not carry out drainage in pus operations? As has already been suggested, the pus that is found in the Fallopian tube and ovary is in the great majority of instances sterile, and if this is the case, what advantage is to be obtained by the use of drainage? Again, if the pus encountered in a given case contains virulent organisms, will the use of drainage prevent a spread of the infection after a complete operation? After a thorough trial of both procedures, I have been forced to the conclusion that no form of drainage will prevent the occurrence of a certain amount of peritonitis if the organism present is virulent. There is, however, a class of cases in which drainage may possibly be indicated, namely, those in which it has been impossible to remove the adherent pus sac or structures completely. In these instances we employ for the purpose gauze sponges, which are introduced through the abdominal incision and carried out through the vagina. If the operation has lasted for a considerable length of time and the patient has been in a more or less marked condition of chronic sepsis, the drainage is kept up for from 24 to 48 hours. I must say, however, that

1. Recently my assistant, Dr. Howard H. Dittrick, has been able to grow the tubercle bacillus from the pus of a tuberculous salpingitis.

I do not feel altogether sure that even under these circumstances the procedure is always absolutely called for.

In passing, I might say that the only other cases which in my judgment call for drainage are those in which it has been impossible to control the bleeding that occurs after the separation of dense adhesions, or in which, during the separation of adhesions, a rupture of the bowel has taken place, and it has been an exceedingly difficult case to close the rent. In the former case the gauze is used more for the purpose of compression, while in the latter it serves to protect the bowel, and should a leakage of the contents take place they can find an avenue of escape by means of the opening made in the cul-de-sac through which the distal end of the gauze sponge is carried into the vagina. On the other hand, if we have not drained and symptoms should arise after an abdominal section, as the result of the absorption of septic material that has been introduced at the time of the operation, or from remnants of the retained diseased foci, we have plenty of time, as a rule, to reopen the abdomen and wash it out again, and then, if necessary, institute drainage in order to prevent the absorption of more septic material. Such cases are, however, fortunately very rare, and if we employ drainage as a routine in order to anticipate such a condition we may run many risks of infecting the patient.

THE TECHNIC TO BE EMPLOYED IN PUS OPERATIONS.

The technic to be carried out in operations for pus in the pelvis differs somewhat from that carried out in ordinary abdominal operations, and although the pus met with under these circumstances is, as a rule, sterile, practical experience has shown it to be a wise precaution to protect as far as possible from infection the portions of the pelvic contents which are apparently intact. In order, therefore, to limit the free distribution of noxious material throughout the abdominal cavity, it is our practice, as soon as the abdomen has been opened, to place large gauze sponges high up in the flanks on either side. If during our manipulations a pus sac is ruptured, we at once lower the patient and then make coverslips of the escaped pus, and, while these are being examined by an assistant, we try to remove as much as possible by mopping it up with gauze sponges. The pelvic cavity is then irrigated with large quantities of sterile salt solution in order to get rid of the greater part of the septic material and to dilute thoroughly any that may still be left. The enucleated mass is now surrounded with gauze which has been moistened in a solution of 1-1000 warm bichlorid of mercury. This gauze is not removed, if it can possibly be kept in place, until the structures have been cut away. If we unexpectedly encounter a pus sac before we have had an opportunity of applying our gauze protection pads, and if the contents escape into the pelvic cavity, the patient is at once lowered to the horizontal posture, and the pelvic and abdominal cavities are irrigated with hot sterile salt solution. The excess having been sponged out and the gauze protection pads placed in position, we then proceed with the enucleation of the mass. The pedicle is thoroughly cauterized with the Paquelin cautery, the abdomen is again washed out with salt solution and sponged dry, after which 300 to 500 c.c. of warm sterile salt solution are introduced and left in the cavity. The incision is closed without drainage. For 24 hours following the operation the lower end of the bed is elevated.

The situation of the pus in this series of 100 cases, the number of cases in which we were able to demonstrate organisms, and the classification of these organisms may be of some interest.

The pus was found as follows: In the ovary, unilaterally, 30 times; bilaterally, 6 times, including tuberculous cases. In the tube, unilaterally, 36 times; bilaterally, 52 times, with the tuberculous cases. In the appendix once. In the walls of the uterus, once. In almost every case in which the pus was unilateral the tube and ovary on the other side were found to be adherent. Infection of the tube and ovary together (tuboovarian abscess) was noted, unilaterally, 21 times, and bilaterally twice. The tubes were more liable to a bilateral infection; the ovaries, to a unilateral infection.

In the tubes and ovaries the following organisms were found: *Staphylococcus pyogenes aureus,* 3 cases; *Staphylococcus pyogenes albus,* 3 cases; *B. coli communis,* 4 cases; *Streptococcus pyogenes,* 4 cases; *Friedländer's bacillus,* 2 cases; *B. tuberculosis,* 2 cases; *Gonococcus,* 8 times positive (six others probable). Thus in 24 cases (24 per cent.) organisms were found.

We were not able to cultivate the gonococcus, except in one instance, and the diagnosis was made in the other cases entirely from the coverslip examinations of sections made from the tissues.

In the two cases in this series which terminated fatally, we had to deal with a streptococcus infection, as was demonstrated by the growth on culture media. In the first case there was a previous history of infection following a miscarriage which had occurred ten weeks before the patient was admitted to the hospital. At the time of the operation we were not able to demonstrate by coverslip examination any organisms in the pus that escaped. No drainage was employed. The infectious material may possibly have been introduced at the time of the operation, although it is quite likely that the process dated from the time of the miscarriage. In the second case the coverslip examination of the pus revealed no organisms, but on tubes inoculated from the pus streptococci were found. The abdomen was reopened on the second day after the operation under cocain anesthesia and washed out, drainage being afterwards instituted. The patient died on the third day. Cultures made from the lung at autopsy showed *Diplococcus pneumoniæ* and *B. coli communis;* in the liver, *B. mucosus capsulatus* was found, and in the peritoneum *Diplococcus pneumoniæ.* In this case, then, streptococci, though not demonstrable by coverslip examinations at the time of the operation, appeared in the culture tubes two days later. At the time of the autopsy only *Diplococcus pneumoniæ* was found in the peritoneal cavity.

CONCLUSIONS.

A careful analysis of this series, therefore, seems to justify the following conclusions:

1. The mortality following operations for suppurative diseases of the tubes and ovaries can be kept under 5 per cent.

2. The death rate is largely influenced by *a,* the virulence of the specific organisms present; *b,* the individual resistance of the patient; *c,* the time and manner of carrying out the operative technic.

3. The micro-organism most to be feared is *Streptococcus pyogenes,* but it must be borne in mind that this organism varies considerably in virulence.

4. Abdominal drainage following operations for pus in the tubes and ovaries is seldom called for, as the organisms are generally dead. Drainage becomes necessary only when it has been found impossible to remove the suppurative structures, or where perforation of the bowel

from the separation of dense adhesions is to be feared. Under these circumstances the best route is by the vagina.

5. The employment of sterile salt solution for irrigating the pelvic cavity will satisfactorily remove the pus or its products and the filling of the abdomen with salt solution will dilute and promote the rapid absorption of any inflammatory products that may be left behind.

6. The elevated position for 24 hours following the operation, with the abdomen filled with salt solution, tends to prevent the intestines and omentum from coming in contact with the immediate field of operation, and as a result adhesions are not so likely to form between the viscera and the incised surfaces.

7. Should symptoms of infection follow the closing of the wound in pus cases, we have, as a rule, sufficient time to reopen the abdomen and wash out the infective material that may have been left behind, or that may have been introduced at the time of the operation.

8. Operations for pus in the tubes and ovaries from the standpoint of the pus *per se* are not surrounded by more danger, as a rule, than those in which a purulent focus is not present.

Special Article.

VACATION NOTES.

G. FRANK LYDSTON, M.D.

Professor of Genito-Urinary Surgery, Medical Department State University of Illinois; Surgeon to St. Mary's Hospital.

CHICAGO.

1. HONOLULU.

There is but one way for a lazy doctor to enjoy himself, and that is to get aboard a sea-going vessel and keep going till his money gives out. He must select a far away destination, and get a through ticket so as to avoid the temptation to become industrious again, and insure against the necessity of swimming home. I selected Australia, via Hawaii, Samoa and New Zealand, and can confidently recommend the trip as the pleasantest and most healthful imaginable. The Pacific weather during September is ideal. Contrary to my expectations it was at no time too hot for comfort. Until Honolulu had been left far behind the weather was very cool. Even in equatorial regions the balmy trade winds redeemed the situation. I was informed that the trip was usually quite as pleasant as I found it. This is an important point for invalids, to whom the enervating effects of very hot weather are likely to be detrimental. My experience with Panama had led me to expect a similarly torrid heat at the corresponding latitude, and the cool breezes of the South Seas came as a most agreeable surprise. Indeed, just before reaching Auckland, and on the sea between New Zealand and Australia, the temperature was lower than I liked, and, now I recall it, it was here that the only unpleasant part of the voyage was encountered—of which more anon.

One of the advantages of taking a late vacation is the scarcity of physicians one meets. When you do meet them the temptation to talk shop is too strong to be resisted, and—away goes the rest you seek. There was only one aboard the steamer. He talked shop, but as he was a Britisher and couldn't talk English, and I carefully concealed my profession, no harm was done. He discoursed learnedly of King Edward's case, and I at first thought he might be Treves, traveling incog. He displayed so much unclassified misinformation on appendicitis, however, that I soon disabused myself of this fallacious notion.

The Hawaiian Islands are destined to become very popular for invalids, and unless Honolulu becomes overgrown—which is not likely in the near future—this city will always be a favorite resort for them. The equable temperature and facilities for out-of-door living and sea bathing the year round constitute most favorable conditions for the chronically sick. Honolulu is a beautiful city and most advantageously situated, but a description of its various attractions would be out of place here. I could not help being impressed with the fact that the fate of the Sandwich Islands exemplifies the rapacity of the Caucasian. The thought that this beautiful country was once the undisputed property and ancestral home of the poor Kanakas one sees about the streets is somewhat depressing. On the main street stands the regal palace of King Kalakaua, now occupied as an official building by the United States Government. On the opposite side of the street, facing the palace, is a heroic statue of King Kamahameha the Great, founder of the dynasty which the revolution, incited and conducted by alien whites, overthrew. To me the statue was most pathetic.

Not the least of the attractions is the magnificent high school building given to the cause of education by Princess Ruth. It was formerly her palace. Ruth was celebrated especially for her great size. She weighed something like six hundred pounds. One of the instructors at the high school says that he uses her bathtub as a swimming pool.

Walking down the principal residence street I chanced to see on the gateposts of a quaintly-artistic Japanese dwelling the names of Dr. Ninomiya and Dr. Oyama. Reposing peacefully on the mat in front of the office entrance were six pairs of sandals, which had been removed by the doctors' patients before appearing in their most august presence. The idea occurred to me as I saw the evidences of material prosperity which those sandals presented, that a similar custom might be popular in Chicago. We can imagine a situation like this: Dr. G. Randstand opens his front door one fine morning and glances at his rival's doorstep across the way. What he sees there almost causes him heart paralysis. Calling his major domo he cries:

"Fujiyama! How now? What is here? That fool, Dr. A. Gallery Play, has fifteen pairs of sandals at his door. What means this, villain?"

Whereat replies Fujiyama, with profound salaam:

"Most Concentrated and Multitudinous Knowledge of All the Centuries, it means simply this: his man, McGinnis, rose too early for me this morning. But bear with me, my liege, and I will make amends."

And next morning G. Randstand finds seventeen pairs of sandals on his own threshold. His honor is avenged, for there are French heels and golf shoes among the job lot purchased at the Fair by the faithful Fujiyama.

Honolulu just at present is enjoying a period of sanitary comfort. Recently harassed by the plague, the disease has practically disappeared, and the health of the city is excellent. Contrary to the usual belief, a few lepers are said to be at large among the natives. It is claimed that these cases are not severe, and so long as the victims do not make themselves conspicuous they are not disturbed. No cases, of course, are to be found in the hospitals.

The principal hospital of Honolulu is the Queen's. This has 120 beds and an average census of 70. Both Kanakas and whites are received here. The Kanakas should have the preference, for the hospital was founded by Kamehameha IV in honor of Queen Emma Kaledokalani. On the wall of the reception room hangs a certificate of Queen Emma's life membership in the "Queen's Hospital Corporation," founded by the first president, Kamahameha IV, June 15, 1859. Here also hang excellent life-size portraits in oil of Queen Emma and King Liholiho, who reigned some forty years ago. One can not fail to be impressed by the face of good Queen Emma, which is beautiful and kindly, even from the Caucasian viewpoint.

The hospital is a rather old-fashioned, two-story structure, somewhat the worse for time and wear. It needs a modern aseptic operating room more than anything else. Considerable surgery is done here, the emergency service being especially good. I inquired particularly in regard to appendicitis, and found not only that a fair number of cases are treated here, but that radicalism is distinctly in favor. The nurses are mainly from San Francisco training schools. I asked one of

them if they had a training school at The Queen's. She replied: "Thank God, no." The nurses are mainly American. There is no obstetric service at Queen's. Such cases are sent to the Maternity Home.

The hospital is under the direct control of a lay superintendent, Mr. Eckhart, to whom I am indebted for much information regarding the hospital. The staff is composed of one resident physician, two visiting surgeons and two visiting physicians. There is the usual ornamental, i. e., "consulting" staff, twenty in number. Dr. G. B. Wood, one of Honolulu's successful physicians, is surgeon-in-chief. No contagious diseases are admitted to Queen's.

The spirits of the staff are buoyed up by the promise of a new and well-equipped modern hospital in the near future. With such a building the institution will be ideal. The grounds are a dream of Fairy Land. Giant royal palms, cocoanut trees, pampas grass, the Pride of India—huge trees ablaze with scarlet bloom—passion trees, date palms, and every conceivable variety of tropic plant and flower serve to make the spacious grounds a paradise for the convalescent sick. A drive or walk through the main isle of stately palms can not soon be forgotten.

There is a small Japanese hospital in Honolulu, but it is unworthy of more than bare mention. The Army and Navy Hospital really deserves but little more attention. Patriotism, and the desire to give Uncle Sam a "hunch" impel me, however, to say something about it.

The hospital was established in 1898. It is now occupying "temporary quarters," which are about as good as Uncle Sam's sick are likely to get for some time to come. The institution consists of several low, one-story buildings built bungalow fashion. There are no separate rooms, only wards. The capacity of the wards is thirty-five. There were only nine patients at the time of my visit. All classes of cases are taken, but were it not for the venereal cases, the hospital, like Othello, would soon find its occupation gone. An occasional surgical case drifts in, however. Three or four cases of appendicitis have been treated there. Radicalism is the watchward, and the cases have all terminated favorably. Even Uncle Sam has awakened, and it is high time for "conservatism" to drop its fetiches. The surgeon in charge is Col. J. B. Girard. I had expected to find our old friend, A. C. Girard, formerly of Fort Sheridan, not noticing the difference in initials, but was doubly disappointed in finding, not only that the surgeon was absent, but that he was not the Girard whom I knew.

(To be continued.)

Clinical Report.

A CASE OF SCOTOMA AURIS PARTIALE CENTRALE ET PERIPHERICUM.*

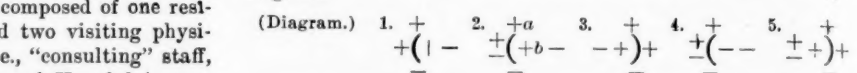
EMIL AMBERG, M.D.
DETROIT.

Miss J. Sch., aged about 40, has been for some time under treatment for otitis media catarrhalis chronica, which may have set in, as patient thinks, after an attack of grippe two years ago, on which occasion she took quinin. There did not seem to be anything unusual in her case.

When patient consulted me again, Nov. 12, 1902, she told me that she was surprised to find out, accidentally, that she could hear a clock at home when the clock was in a position upward from her right ear, but that she could not hear the same clock, at the same distance, when the clock was on a level with the ear. I examined the patient with a watch, which can be heard normally at a distance of about 100-150 inches, and could confirm the patient's own observation. At a distance of about 3¾ inches the watch was heard at a height corresponding about to the top of the auricle, whereas the watch was not heard at the same distance directly opposite the canal and below. On the left side I found that the watch was heard, at very reduced hearing distance, opposite the canal and not above and below the auricle.

November 18 I examined the patient again, repeatedly, and found she almost constantly heard the watch (+) or did not hear it (—) when the watch was in places indicated in the diagram.

(Diagram.) 1. + 2. +a 3. + 4. + 5. +



1 to 3, before treatment with Eustachian catheter, Nov. 18, 1902:
1. Right ear. Watch in a frontal distance of about three inches.
2. Right ear. Watch in a frontal distance of about two inches.
(*a*) Very loud; (*b*) not so loud.
3. Left ear. Watch in a frontal distance of about two inches.
4 and 5. After treatment with the Eustachian catheter.
4. Right ear. Watch in a frontal distance of about 3½ inches.
5. Left ear. Watch in a frontal distance of about 2¼ inches.

The findings in the case reported are extraordinary. All I can find in the latest edition of Politzer's text-book are a few lines on page 629: "Brunschwig gave the name of scotoma auris, an anomaly of perception, to a phenomenon consisting in the fact that in single cases a source of sound, e. g., a watch, is heard at a certain distance; that it is not, however, heard at a certain point when brought nearer to the ear. Guye (Records of Conference at Brussels, 1888) finds the explanation in the prevention of perception of the sound by the normal ear by the 'shadows of sound' which are created when the source of sound is brought nearer to the affected ear."

Gradenigo, on page 552, of the second volume of Schwartze's Handbuch der Ohrenheilkunde, says: "I will mention here another phenomenon which has been observed for the first time by Brunschwig in Baratoux's clinic, and which has been described later in five cases by Longhi. This consists in the fact that there exists a negative field of perception for a certain sound (watch, tuning fork, etc.) in the hearing distance of an ear: E. g., the sound of the tuning fork was heard in a distance of 25-15 cm. from the ear, from here until to a distance of 10 cm. perception suddenly ceased, and appeared again immediately near the concha (in a case of Longhi). In these cases there existed a very marked diminution of hearing in the other ear, but it did not seem to have any influence on the phenomenon. (Shadows of sound of Guye.) There existed catarrhal lesions of the middle ear, and portions of the drum membrane were atrophic and cicatricial. Longhi was, therefore, inclined to explain the symptoms by considering the difference in tension of the various segments, by which there would be created an interferenee of the sound waves. He also thinks that the muscles of the tympanic cavity are probably of influence. In these cases there was no phenomenon present which could be referred to the inner ear."

If we consider these remarks we see that no report is given about the phenomenon observed in my case. Furthermore, it appears to me that the name scotoma auris does not cover the symptoms. At least, we do not learn, from these reports, that the examination has been extended to this lateral periphery of the field of hearing. It would, therefore, seem appropriate, in my opinion, to propose, for the phenomenon reported by Longhi, the name: "Scotoma Auris Centrale Partiale," whereas I should like to name the phenomenon observed in my patient: "Scotoma Auris Partiale Centrale et Periphericum." The probable cause may perhaps be looked for:

1. In the formation of the auricle and the concha.
2. In the formation of the meatus.
3. In the changes in the membrana tympana corresponding to similar changes which we find in the eye and which we name astigmatism.
4. In changes in the tympanic cavity.
5. In affections which we call functional neuroses.

I do not attempt to explain the phenomenon in our patient, but I am inclined to attribute it to the formation of the concha and meatus, and the quality of the membrana tympani.

November 27 the symptom was less constant, and on December 2 it could not be demonstrated. The patient reports, however, that the clock at home is still heard better in the right ear when held higher. It is not impossible that the symptom may be attributed to a disturbance classifiable under the fifth cause enumerated above.

* Read before the Wayne County (Detroit) Medical Society, Nov. 20, 1902.

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CATARACT IN INDIA.

The enormous number of operations done for cataract by the ophthalmic surgeons of India is amazing. In a recent article R. H. Elliot,[1] of the Government Ophthalmic Hospital, Madras, reports a series of 500 consecutive operations for primary cataract performed in five months. A little over a year ago several of the great cataract operators of India published articles[2] on this subject. At that time T. H. Pope based his conclusions on the subject of cataract extraction on 5,290 operations between 1896 and 1901, and over 4,000 done before 1896. Mr. Henry Smith, of the Jullender Civil Hospital, reported 1,804 extractions of cataract from June 1, 1899, to May 1, 1900, and 1,650 extractions from May 1, 1900, to April 2, 1901. Mr. J. Lewtas wrote of 147 extractions during the "past three months." Mr. Park of Jaipur reported 2,414 operations in five years. Mr. Collins, the assistant surgeon of the Madras Government Hospital, who helped Mr. Elliot in his operations, has seen about 12,000 extractions.

To make these numbers more appreciable, it is interesting to compare the number of cataract operations done in the largest eye hospital in America. At this hospital,[3] with its 25,000 to 30,000 new eye patients per year, 180 extractions were done in 1899, 182 in 1900 and 162 in 1901. And it is striking to compare the numbers reported by the Anglo-Indian surgeons with those of the greatest cataract operator in America. This surgeon, who began as long ago as 1868, when he reported 200 extractions, speaks, in a private letter, of having done over 4,000 cataract operations, and of his despairing of living long enough to do another 1,000.

When Mr. Smith's report appeared we were, of course, astonished at his statement that he had done 44 extractions on each of two days, and the conclusion seemed fair that a record of 44 operations for cataract in one day would for years remain unbeaten. Mr. Elliot has broken this record. On one day he did 53 extractions. This certainly is the record for cataract operations in one day, and will probably stand for a while. On three other occasions Mr. Elliot did more than 40 extractions in one morning.

Noting this immense number of operations, the idea occurs to one's mind that maybe the very numbers would make these operators careless. The reading of these articles banishes this idea. For instance, Pope, in his general remarks, gives it as his opinion—after 9,000 operations—that the surgeon should refrain from being in a hurry to publish his views in regard to what he thinks is the best method of operation and as to what are the causes of different complications. The article from Elliot, which, by the way, we imagine may be considered as a report of the latest methods and views from the Government Ophthalmic Hospital, Madras, is full of interest. Of course, anything on cataract coming from the Madras hospital must command attention; a few of the procedures practiced by Elliot are particularly worthy of note. That of lacerating the capsule of the lens, as he does it, by means of a Bowman stop-needle, before the section is made, appears to have advantages over the method as practiced in this country and Europe, of doing the capsulotomy after the section is made. He also calls attention to the value of morphia given hypodermically when the patient is nervous and will not obey. As a routine procedure, iridectomy is performed, and at the time of the extraction; in the 500 cases iridectomy was done in 484 of them. He washes out the cortical debris by irrigation, using MacKeown's irrigator, and says he owes a great debt to Professor MacKeown for allowing him to witness his method of using his apparatus. This irrigator, according to Elliot, by removing debris expedites recovery and minimizes the need for subsequent capsulotomy, dispenses with the introduction of instruments into the eye after the escape of the nucleus, and has enabled him to operate fearlessly on a large number of very immature cataracts, in which, without it, he would not have ventured to interfere.

It would seem that an operation like that of extraction of cataract (we might modify this statement by speaking of the operation in the hands of the average operator) could have been perfected by this time. This has not been done, and argument over different methods and procedures continues in the highest quarters. In the final adjustment of this operation, we venture the opinion that the methods of the Anglo-Indian ophthalmic surgeons will have an important place.

1. The Lancet, Nov. 8, 1902, p. 1252.
2. Indian Medical Gazette, June and July, 1901.
3. New York Eye and Ear Infirmary Reports, 1900, 1901, 1902.

THE PROFESSIONAL SPIRIT.

Very few of us probably ever really give any very serious thought to what constitutes the difference between the professions as such and the other means of getting a livelihood. That there is a certain social distinction made we are all aware, but it might puzzle some of us to give an adequate accounting for its existence. This distinction is not in externals, though they have their effect. Perhaps most of us would first assume that it is based on the educational culture that the professions are supposed to require of their members. This has also, beyond question, its influence in creating the popular distinction, but it alone does not account for it altogether. We have had learned black-

smiths, stonemasons and shoemakers, but no one included them among professional men so long as they followed their occupation. Mere learning does not inspire popular respect to more than a very limited extent; there must be something more. Not all professional men are respected or respectable, but there is certainly a sort of prestige that exists of the professions as such.

Perhaps the best explanation, at least as regards the profession of medicine, is that given in a recent address by Professor Smart[1] of the University of Glasgow, which seems to us to contain some ideas that are well worthy of our consideration. He asks what differentiates the professions from the trades, and answers his question by quoting Ruskin, who "with all his extravagances saw right through to the heart of things." Ruskin asked why the common consent of mankind gives the precedence to the soldier over the merchant, and gave as the reason that the former held his life at the service of the state. We know that "put him in a fortress breach, with all the pleasures of the world behind him and only death and duty in front of him, he will keep his face to the front." It is the same with the true professional man, and more than all with the physician, who, like the soldier, but much more constantly, risks life and health for others' sake. It is not in this, however, that we are to find the true secret of the professional spirit and the reason of the honor in which it is held. There are plenty of men who risk life daily for a wage, and who think of nothing higher. The mere risk of the occupation is a secondary matter, the real distinction is, as Smart says, the putting of the work before the wage. There are, as he says, many physicians who will disclaim this, who will say that they do their work for the pay, but it is a poor-spirited physician and also an exceptional one whose practice coincides with this, whatever may be his professed theory. The professional spirit influences conduct even of those who would disavow it; professional pride and self-respect make the interests of the patients superior to one's individual interests and convenience. The Code of Ethics is only a formulated statement of the principles that unconsciously influence every medical practitioner worthy of the name. The public, therefore, puts confidence in the physician and regards him in a very different light from the tradesman and mere wage earner, whose business morals have personal interest as the chief good. Of course, there are many exceptions, tradesmen and mechanics and others who put their conscience into their work and these, too, have the true professional spirit, but they do not to the public represent their class or earn for it the regard that is given to the professional man.

It does not follow that we should neglect our interests, the laborer in these fields as in others is worthy of his hire, but we must keep ourselves clear of the taint of commercialism, the spirit that makes the tradesman's motto, at least too often, *"caveat emptor"*—let the buyer look out for himself. With us the word should be, as Smart suggests, *"caveat venditor"*—let us see first that we do good service for our wage. In times like these, with the present tendencies of labor agitations on the one hand and of combinations and trusts on the other, it is especially needful that we should keep up and live up to our best traditions and continue to earn the honorable estimation that has heretofore been given us.

1. Lancet, December 6. "Address on the Meaning of a Profession," delivered at the opening of the winter session at Anderson's College Medical School, Oct. 17, 1902.

THE CLINICAL SIGNIFICANCE OF LEUCOCYTOSIS.

Study of the blood has within the past two decades come to be an important aid in clinical diagnosis. Microscopic examination and culture methods often disclose the presence of parasites in the blood, and the specific agglutinating influence of the serum on colonies of certain bacteria constitutes a most valuable diagnostic guide, while a determination of the specific gravity, of the hemoglobin percentage and of the number of red and white corpuscles respectively, frequently furnishes useful information. An increase in the number of colorless corpuscles had long been known to occur physiologically during the digestive process, and pathologically in conjunction with leukemia. Under the condition first named the leucocytosis is transitory, while under the latter it is persistent. Increasing experience, however, showed that an increase in the number of leucocytes occurs in association with various inflammatory disorders, such as pneumonia, suppurative processes, etc., while the number remains unchanged or even undergoes reduction under other conditions, as, for instance, in the presence of uncomplicated typhoid fever. A distinct advance was made when it was learned that the colorless corpuscles were not all alike, but really consisted of several varieties that could be readily differentiated by means of their size, the number and form of their nuclei and their reaction to special stains. Thus, it has been found that the small mononuclear lymphocytes are increased after the ingestion of food and in cases of lymphatic leukemia, while myelocytes are characteristic of splenomedullary leukemia, in connection with which they may be present in large numbers. The eosinophile cells undergo marked increase in cases of trichinosis and probably other forms of animal parasitism. As a rule, however, the increase in the number of white blood corpuscles constituting leucocytosis involves especially the polymorphonuclear cells, which appear to play an active part in the process of phagocytosis. According to the commonly accepted definition leucocytosis consists in an increase in the number of white blood corpuscles in the peripheral blood, generally with a marked absolute and relative gain in the polymorphonuclear cells, but in a recent communication, Dr. Robert N. Willson[1] questions the correctness of this

1. Proceedings of the Philadelphia County Medical Society, December, 1902, p. 396.

definition, maintaining that the proportion of polymorphonuclear leucocytes may be increased without increase in the total number of leucocytes, and vice versa. To the former condition he applies the designation relative leucocytosis, and from his experience he concludes that when this is present it is suggestive of the existence of suppuration or of some other active inflammatory process in conjunction with marked depression of the resisting forces of the body. As to the clinical significance of leucocytosis, Dr. Willson points out that it must be looked on as only one clinical sign that should receive consideration in relation to all of the other phenomena in the case.

ACUTE AND CHRONIC INFLUENZA.

The diagnosis of influenza, even in times of epidemic, is not always easy, and by no means certain, in the absence of bacteriologic evidence. Catarrhal symptoms referable to the respiratory and digestive tracts, articular and muscular pains, elevation of temperature and other manifestations supposed to be more or less distinctive of influenza are not rare, singly or collectively, as a result of a variety of causes, particularly during the cold season. It would, therefore, seem that the demonstration of influenza-bacilli in the discharges or the blood is, at the present time, as important a factor in the diagnosis of influenza as is the demonstration of tubercle bacilli or of diphtheria bacilli in the diagnosis of tuberculosis or diphtheria.

The following method for staining the sputum for various bacteria is described by Dr. Wm. H. Smith,[1] in whose hands it has proved most serviceable. The dried and fixed cover-glass preparation is first stained with anilin-oil gentian-violet, the excess of which is washed away with a solution consisting of 1 part of iodin, 2 of potassium iodid and 300 of water. The specimen is then covered with this solution and heated. It is next decolorized as much as possible with 95 per cent. alcohol, then washed for a few seconds in a mixture of 4 parts of 95 per cent. alcohol and 6 parts of ether, and next in water, and exposed for a few seconds to the action of a saturated solution of eosin in water. The excess of eosin is washed off with Löffler's alkaline methylene-blue, the specimen again heated, decolorized slightly with 95 per cent. alcohol, washed in absolute alcohol, cleared with xylol and mounted in Canada balsam. The protoplasm of the leucocytes, lymphocytes, erythrocytes and other cells is stained red by the eosin, the nuclei of the cells blue. Micro-organisms that do not take Gram's stain appear black or deep violet, while those that take this stain appear blue. Capsules and cilia when present are stained red by eosin.

Tubercle bacilli require special staining by one of the usual methods. The special stain described was employed by Dr. Frederick T. Lord,[2] in a study of the sputum in 100 cases for the purpose of determining the cause of the cough and expectoration present, and in which examination for tubercle bacilli had failed to disclose their presence. In 60 of these cases influenza bacilli were found in varying numbers, and in 29 of these the bacilli were present in overwhelming numbers. As a result of his observations Dr. Lord concludes that infection with influenza bacilli is prevalent apart from an epidemic of influenza, and that there is nothing distinctive in the clinical manifestations to which the disease gives rise apart from their epidemic occurrence, so that the diagnosis can be made with certainty only by examination of the sputum for influenza bacilli. The duration of the cough and expectoration after an attack of acute influenza does not usually exceed six weeks, but in some cases it may be extended over months and years. Many of the cases heretofore classified as chronic bronchitis are in reality examples of chronic influenza. Cases of this character with paroxysmal dyspnea may closely resemble asthma. Chronic influenza is not infrequently mistaken for pulmonary tuberculosis.

1. Boston Medical and Surgical Journal, Dec. 18, 1902, p. 659.
2. Boston Medical and Surgical Journal, Dec. 18, 1902, p. 662.

IMPROVED TREATMENT OF EMPYEMA.

The medical treatment of empyema has long been a disappointment and the operative treatment has not been all that could be desired. Though old as Hippocrates operative intervention has come to be considered more in the sphere of the surgeon than the physician, and anything, therefore, that will render it more practicable for the practitioner and a more early and general recourse is a boon to mankind.

In a paper on the subject of the treatment of suppurative pleurisy, read before the Illinois State Medical Society, Dr. E. Fletcher Ingals[1] recommends an operation which can be performed by the average practitioner and which seems in many respects to be an advance on the methods heretofore employed. It consists in the introduction of a double drainage tube through a trocar inserted in the intercostal space and secured there after withdrawal of the instrument in such a way that it is perfectly under the control of the operator. Ingals gives an analysis of the cases in which this method was employ with the percentage of recoveries of 100 in early cases and 64 in those of long duration. He thinks if this operation can be performed early, in cases of empyema caused by the pneumococcus, from 95 to 98 per cent. of recoveries can be expected, and in all other cases in which the side is not retracted it will give as good results as any other operation. It does not require general anesthesia and is no bar to subsequent exsection of the rib if that is thought advisable. He advises the latter operation if after a few months a cavity remains that can not collapse because of induration or rigidity of its walls. Exsection of the rib, of course, of itself is the elective method where the intercostal

1. Illinois Med. Jour., January.

spaces are greatly narrowed by chest retraction, but in other cases in which such has not occurred, the double drainage tube and exclusion of air for several days has much greater advantages. So far as we have seen, this particular operation has not been recommended by any other operator, but it is with the results attained a decided advance over other methods. The outcome of empyema, whether in the form of early fatality or prolonged chronic disturbance without any expectation of an ultimate cure, is such that an easy operation like the above described, performable in the early stages and hardly more serious than aspiration, should be welcomed. Ingals believes, however, that aspiration should precede any operation for empyema and should be repeated at intervals of several days until the cavity is emptied, and then, after allowing a short time for reaccumulation of matter, a radical operation should be done. In this way we may expect successful results.

APPENDICITIS IN FASHION IN ENGLAND.

Sometime ago THE JOURNAL prophesied a probable greater extension of the disease of appendicitis in British high life through the example set by the king. This prophecy is reported by the daily press as having been fulfilled. Appendicitis is increasing, it is said, in Great Britain by leaps and bounds so that operations for this disease are becoming more and more common. The Countess of Dudley, one of England's noted beauties, is one of the latest who has gone through the operation, and if we had recourse to all the records perhaps we would find, as is said by newspaper writers, that aristocratic appendices are being amputated at very short intervals. What will be the outcome and how long the epidemic will last is beyond knowledge, and we have stopped foretelling.

THE NEW INDEX MEDICUS.

A circular has been issued announcing the renewal of the publication of the *Index Medicus* by the Carnegie Institution, Washington, D. C., subscription price paid in advance $5.00 per annum in the United States and Canada, and in foreign countries 25 shillings or marks, or 35 francs or lire. The plan is to follow out much the same course as in the earlier publications, giving the titles in full of books, pamphlets, theses, contributions to co-operative work, and original articles in the journals, transactions of medical and scientific societies, all arranged under subject headings. The titles in certain languages, such as the Russian, Polish, Swedish, Danish, Turkish, Hungarian, Bohemian, Roumanian, Japanese and Chinese, are to be translated into English. Other languages which are presumably more generally known will be left untranslated. A good point in the new publication is the promise of the editor that while indexing all real original matter it will not include reports of progress or all copies of an article which may appear in other journals. It was somewhat of an embarrassment in utilizing the *Index Medicus* formerly published to find so many cases of repetition of the same title owing to the common habit of cumbering the record by certain authors, a notable instance[1] of which has recently been commented on in THE JOURNAL and elsewhere. The profession is to be congratulated on the fact that the Carnegie Institution has thus undertaken the republication of the *Index Medicus*.

1. See THE JOURNAL A. M. A., Nov. 22, 1902, p. 1326.

CORRESPONDENCE SCHOOLS FOR NURSES.

Short cuts into medicine and its allied professions are becoming numerous. Before us is an advertisement of the Chicago Correspondence School of Nursing of Pierre, S. D., licensed to transact business in Illinois with a state capital of $2,500. If there is any occupation that would seem to us to require direct special object-teaching and experience, it is nursing, and what class of products the correspondence school will turn out is a matter of some interest. Nursing is a practical handicraft, as little theoretical in many respects as anything can be, and any part of it that can be taught by didactic teaching or correspondence is comparatively minute and unimportant. The value of well-trained nurses is appreciated, not only by physician and patient, but by the general public, and it is very natural that attempts should be made to furnish a cheap imitation; but we as physicians, knowing what poor nurses may be, are interested in forestalling such attempts as far as possible. If there is to be a correspondence school of nurses let us make sure that we do not get any of their graduates among our aids. She would be a very exceptional one who would be of much use.

COSMIC MICROBES.

Those who have read Mr. H. G. Wells' ingenious fiction, "The War of the Worlds," in which the superior beings from another planet threatened to destroy the existing population of the earth, but were overcome by the microbes which they found, will be interested in the recent speculation of the reverse of this by a Western scientist. He asks, is there any reason why small living bodies, such as spores or microbes, should not be floating about by themselves in the interstellar space and, in some ways which are easily conceivable, from time to time enter into our atmosphere and infect our planet? In this way the origin of new diseases and possibly of many other phenomena which we can not foretell might be accounted for. The idea is not an altogether new or extravagant one; Sir William Thomson (Lord Kelvin) theorized on the introduction of life into our planet by meteoric bodies. He suggested that spores floating about in the atmosphere of this or some similar planet might easily become detached in the upper regions where we know perpetual hurricanes exist and, if shot off on a tangent, might wander through space beyond the reach of gravitation until sometime they come within our own or some other sphere of attraction and develop under the conditions that they find. Recent experiments have shown that the greatest degree of cold that can be artificially produced, probably fully as great as that in the interstellar space, does not have an effect on bacterial life, at least not on all forms of it. In this way the prospects of the possible morbidity on our earth, and perhaps of some things that are much better, is illimitable. The speculation is one that is at least respectable and perhaps might be seriously considered.

Medical News.

ILLINOIS.

Vital Statistics.—Peoria reports 745 deaths during 1902, a death rate of 10.64 per 1,000.——Danville's death rate for the year was 18.3 per 1,000, consumption, accidents and heart disease leading in the order named.

Typhoid Rife in Elgin.—More than fifty school children of Elgin are ill with typhoid fever, and the president of the board of education has issued a proclamation urging boiling of water and individual drinking cups. The water supply of Elgin is taken from Fox river, which is said to be not above reproach.

Proposed Legislation.—A bill to be introduced abolishes the office of coroner and transfers his duties to some other officer—another provides for a board of medical examiners, separate from the State Board of Health—a third looks to state isolation and care of consumptives—a fourth recommends the establishment of a state home for epileptics.

Personal.—Drs. Charles W. Compton, S. R. Hopkins, John W. Kelly, Herman H. Tuttle and Edmund A. Walsh have been added to the attending staff of St. John's Hospital, Springfield.——Dr. Thomas W. Keyes, Leroy, after a rest of two years, has resumed practice.——Dr. Myron L. Huntington, Moline, dreaming he was attacked by burglars, seized a revolver and shot himself in the right leg.

Chicago.

Fire Damage.—An explosion of gas followed by fire, January 2, destroyed the library and office equipment of Dr. Orrin B. Hayden.

Smallpox.—During last week 6 smallpox patients, none of whom had ever been properly vaccinated, were sent to the isolation hospital. Three of the patients were waiters in restaurants, one of whom claimed to have contracted the disease in Toronto, and another in Cincinnati.

Personal.—Dr. and Mrs. Daniel R. Brower left Chicago, January 12, on a silver-wedding trip to the West Indies. They will return in about four weeks.——Dr. David O'Shea has returned from Europe.——Dr. Franklin C. Wells has gone to New York City, where he will be chief of the medical inspection department of the Equitable Life Assurance Society.

The Week's Deaths.—During the week ended January 10 625 deaths were reported, equivalent to an annual mortality rate of 17.29 per 1,000, which compares unfavorably with the rate for the corresponding week of 1902, which was 14.79 per 1,000. There was a marked increase in the deaths over 60 years of age and in bronchitis, consumption, pneumonia, typhoid fever, and especially in scarlet fever, as compared with the previous week.

Street-car Colds.—Under this heading the department of health offers the following seasonable advice:

"Street-car colds" are, in the experience of every physician in general practice, increasing with frightful rapidity. Pneumonia and bronchitis, as direct results, are endemic in every part of the city. Since the first of the year there has been a 22 per cent. increase in the deaths from these two diseases, and, as compared with the first ten days of 1902, the increase is a little more than 41 per cent.

Again the department urges that every able-bodied person shun the street cars, both surface and elevated, as far as possible.

The Coal Situation and Public Health.—The department of health thus summarizes the effects of the present fuel situation on the public health:

Fully 10 per cent., or nearly 200,000 residents of Chicago, are to-day suffering from ailments of a grave character caused by privation and exposure resulting from the coal famine. Already these ailments are reflected in the enormous increase of deaths among those at the extremes of life—the young and the aged, in both of whom the powers of vital resistance are at the lowest. Since the first of the year there has been an increase of nearly 20 (19.2) per cent. in the number of deaths among those under 5 years of age over the number in the corresponding period of last year, when this death rate was about normal. Among those over 60 years of age the increase is much greater—24 per cent. last week over the week previous and 36.7 per cent. over the normal rate of the corresponding period of 1902.

This excess of increased death-rate among the aged is caused chiefly by the effects of cold and exposure in hastening to a fatal termination many of the chronic diseases, the sufferers from which under ordinary conditions might have survived for many years.

MARYLAND.

Smallpox in Allegany County.—James M. Spear, health officer of Cumberland, has discovered that a case of smallpox has been concealed there since Dec. 7, 1902. Two new cases in the same house led to the discovery. Dr. Spear will take the case before the grand jury.

Tuberculosis Data.—The tuberculosis commission of the state of Maryland, Dr. William S. Thayer, president, met, January 10, at the office of the State Board of Health. Dr. Marshall Price was appointed medical officer of the commission. He will have charge of all statistics and the general work of the commission. Inquiries will be sent at once to institutions and physicians, with blanks for regular reports. Dr. William H. Welch has endorsed the work of the commission with the following letter addressed to the medical profession of the state:

The Tuberculosis Commission of Maryland has permission, under certain necessary restrictions, to use the laboratory and death records of the State Board of Health for the purpose of its investigation. The State Board of Health also commends in the strongest possible manner the work of this commission to the interest and aid of practicing physicians. If every physician in the state will, to the best of his ability, answer the few inquiries which the tuberculosis commission will make in the next year, we shall obtain what all of us feel is a pressing need—an accurate view of the amount and distribution of tuberculosis in Maryland.

Baltimore.

A memorial meeting in honor of the late Dr. Martin B. Billingslea was held January 12, at which addresses were made by the representatives of the various organizations to which he had belonged.

Measles and Mortality.—The epidemic of measles reached the high-water mark last week, 300 cases being reported. There were 5 deaths directly attributed to measles and about 50 from respiratory diseases, many no doubt caused by measles. The total mortality, 217 for the week, was unusually large, 20.39 per 1,000.

Presbyterian Eye, Ear and Throat Hospital.—The twenty-fifth anniversary of the founding of this special hospital, one of the largest of its kind in America, took place January 9. The report shows that 11,317 patients were treated during the year, representing 40,204 visits. The patients were divided as follows: Eye department, 7,137; ear department, 2,007; throat department, 2,103. The question of endowment was discussed, and the secretary announced that offers amounting to $15,000 had been made conditional on the collection of an equal sum. Dr. Francis M. Chisolm was re-elected secretary, and Drs. Hiram Woods and John A. Winslow members of the board. The institution owes its origin to the energy of Dr. Julian J. Chisolm, at present emeritus professor of eye and ear diseases in the University of Maryland, who has retired from practice and resides at Petersburg, Va.

Purity of Ice Cream.—Miss Henrietta M. Thomas, a student at the Woman's Medical College, has been conducting an investigation in the City Bacteriological Laboratory under Dr. W. Royal Stokes, with reference to the purity of ice cream. The primary object was to discover the typhoid bacillus, but none of these were found. Other germs, however, were discovered, as *B. coli*, *Bacillus annulatus*, gas bacillus, *Bacillus arborescens*, pneumococcus, streptococcus, yellow, lemon and cream-colored tetrads and yeast. About 25 specimens of "hokey-pokey" and high-priced ice cream from all parts of the city were examined. The colon bacillus was omnipresent. In one specimen injected into the abdominal cavity of a guinea-pig, death ensued from general peritonitis in 24 hours; the only organism recovered was *B. coli* from the blood of the liver. Several specimens of snowballs all contained *B. coli*, indicating contamination. The specimens were extremely poor in fat, especially the cheaper sorts, the percentage being never higher than 11.2, and in one case as low as 1.25. The number of bacteria in 1 c.c. varied from 378,000 to 36,600,000, being practically the same as in fresh cream. This remarkable result is probably due to the fact that there are certain kinds of bacteria which are reduced by freezing (Prudden). The conclusion is either that the cows from which the milk was obtained were infected or that the handling of the ice cream was very careless, thus rendering it unsuitable for food. Both of these causes of contamination can, and ought to be obviated.

NEW YORK.

Needs Hospital.—The Auburn Board of Health has asked the common council for an appropriation of $25,000 for a new isolation hospital for smallpox patients.

Personal.—Dr. Montgomery E. Leary, Rochester, has resigned as coroner's physician of Monroe County, and Dr. Irving E. Harris has been appointed in his stead.——Dr. Francis P. O'Neil of Elmira, N. Y., has been appointed on the resident

staff of the City Hospital, Baltimore, attached to the College of Physicians and Surgeons.

The Coroner's Office.—The annual report of the board of coroners shows there were last year 2,820 deaths which called for investigation; that as a result of such investigation 543 persons were held to the grand jury; that 1,236 inquests were held and 644 autopsies performed. The board asks for a chemical and bacteriologic laboratory and for a larger clerical force. The committee of the county medical society appointed to consider the advisability of abolishing the coroner's office reported in favor of so doing, but the coroners and their friends made such a vigorous protest that, after a special evening devoted to a discussion of the subject, the society finally voted to reject the report of its committee. On the other hand, it is announced that the counsel for the New York county and state medical associations has submitted to the district attorney the draft of a bill, to be introduced in the legislature, which calls for the abolition of the coroner's office, and the substitution of experienced pathologists. The district attorney is reported to approve of the bill.

State Hospitals for the Insane.—The governor, in his message, devotes considerable space to the state hospitals for the insane, and particularly to the workings of the new system which he inaugurated a year ago. He asserts that the new law has resulted in the separation of the medical from the business administration of these institutions; has saved the state about $20,000 per annum; has limited the cost of new buildings to $450 per capita, and, above all, has absolutely fixed the responsibility for the administration of these institutions in the State Commission in Lunacy. The recoveries during the past year have been only 1,125, as against 1,200 for 1901, but this is thought to be largely accounted for by the fact that certain local hospitals are now caring for the early and acute cases, so that a larger proportion of the cases coming to the state hospitals belong to the incurable class. Moreover, though the percentage of cures is less than in 1901 it is equal to the average for the preceding six years, and the death rate has been lower. He recommends the establishment of tuberculosis hospitals at six of the institutions at a cost of $90,000, thus reducing the danger of communicating this disease to other inmates. The commission in lunacy suggests that a new hospital for the care of recent cases of insanity be established in New York City.

New York City.

Beth Israel Hospital Aided.—The recent fair in Madison Square Garden realized about $25,000 for Beth Israel Hospital.

Addition to Harlem Hospital.—An extension for this overcrowded hospital has at last been secured in the shape of a three-story house. In it will be housed the dispensary, which at present is in a ramshackle structure built out over the river. It will also provide 30 beds for children and 20 beds for maternity cases.

Personal.—Dr. Albert H. Brundage, Brooklyn, has been elected president of the New York State Board of Pharmacy. ——Dr. Emily Dunning, on January 1, commenced a two years' term of service as interne and ambulance surgeon at Gouverneur Hospital.——Dr. Henry P. DeForest, Brooklyn, has been appointed a police surgeon, vice Dr. Benjamin Wood, retired on pension.

Croton Water Not Responsible.—The examinations of the Croton water made by the health department do not indicate that the water supply is responsible for the prevalence of typhoid. The health authorities are disposed to lay the blame on the use of oysters, clams, and some vegetables and milk. During the week ended January 3, 68 cases of typhoid fever were reported, which is in excess of the number for the corresponding period of last year.

Old Bellevue Landmark Gone.—Many medical students, as well as the physicians who in past years have had occasion to frequent the vicinity of Bellevue Hospital, will be interested to learn that the "coffee house," or more properly the Manhattan East Side Mission, which has long been situated opposite Bellevue Hospital, is a thing of the past. This mission was maintained by the New York Bible and Fruit Mission, an association originated by Mrs. Collins. The newer members of the association have lacked the enthusiasm which spurred on the original workers, and, as a consequence, the necessary funds have not been forthcoming. The Supreme Court has granted the petition of the directors for permission to wind up the affairs of the association.

Buffalo.

Bequest to Hospital.—Through the bequest of W. C. Mills the Buffalo General Hospital received $10,000.

Personal.—Dr. Frederick Zingsheim was elected to fill a vacancy in the department of children's diseases and Dr. Pietro Tartaro a vacancy in the department of skin diseases at the German Hospital.

Resolutions.—At a special meeting of the medical staff of the dispensary of the German Hospital, resolutions were adopted deploring the death of Dr. Jacob Kraus and eulogizing the many good qualities of the deceased.

Election of Staff.—At the annual election of officers of the staff of the German Hospital the following were re-elected: President, Dr. Charles A. W. Auel; vice-president, Dr. Marcello Hartwig, and secretary, Dr. Charles Weil.

Health Commissioner's Annual Report.—In the annual report of Health Commissioner Greene the following recommendations are made: A fumigation plant so that the department of health may supplement its work of discovery of infection by prevention of its spread; a filtering plant, as while the city water supply can be considered fairly good, it is not wholly free from danger because of the fact that the lake and the rivers are polluted to some extent by the cities draining into the lake above Buffalo. The possibility of typhoid fever from lake water must necessarily be present during certain periods of every year; its cause is one beyond present control, and therefore it is pertinent to consider practical means of overcoming the conditions and results as stated. During 1901-1902 there were 438 cases of smallpox in Buffalo, whereas at present there are but 5, and in each of these cases the contagion came from without.

PENNSYLVANIA.

Sued for Damages.—Dr. Louis H. Fackler, East Berlin, has been sued for $30,000 damages by W. G. Leas, for alleged neglect in the last illness of his wife.

Only One-Sixth Rejected.—Of the 77 applicants who recently took the examination before the State Medical Board 64 received license to practice—a failure of 16.5 per cent.

Typhoid at Bellefonte.—Bellefonte has an epidemic of typhoid fever, which is causing considerable local alarm. About 40 cases have already developed, with two deaths, and a number of patients critically ill.

Bacteriologic Laboratory for New Castle.—Councils have reported in favor of the establishment of a municipal bacteriologic laboratory, as suggested by the Lawrence County Medical Society, to be maintained from the public funds. The equipment of the laboratory will cost about $1,000, and $50 a month will be paid to a physician to be on duty at specified hours.

Health Board Resigns.—All the members of the board of health of Chester, Pa., have tendered their resignations, to take effect when their successors are appointed. The board, consisting of five members, have been accused of inefficiency in connection with the smallpox situation. The members claim, however, that they have no authority to enforce vaccination, and that their plans are not carried out.

In Trouble and Out.—A clergyman of Altoona was recently arrested at the instance of the secretary of the local board of health, charged with failing properly to fill out returns of marriages.——A verdict of not guilty has been returned in the case of D. C. Hancher against Dr. William A. Shannon, Ellwood, who was charged with being a "public nuisance" for not having reported a case of smallpox to the secretary of the Ellwood Board of Health. The costs were placed on the county.

The Quarantine Report.—According to the recent report of Dr. Heller, port physician to the State Quarantine Board, last year was an unusually busy one at the quarantine station. The total number of persons examined and detained was 73,090. Deaths reported on inward-bound vessels, 14; births, 5. Medical cases numbering 780 were treated at the hospital, and 405 surgical cases were treated by the quarantine surgeons. It is announced that the state has purchased the site on which the Marcus Hook Quarantine Station is located.

Philadelphia.

University Hospital To Be Enlarged.—The University of Pennsylvania Hospital is to be enlarged and improved. About $300,000 is to be expended, which will nearly double the capacity of the institution.

Expectoration Prohibited.—An ordinance has been passed by the common council making expectoration on the sidewalks, in public places and conveyances, a nuisance, and providing a penalty of $5 for violation of the ordinance.

Hospital Ordinance Signed.—Mayor Ashbridge has signed the ordinance for the purchase of the Macalester farm, in the Thirty-third Ward, for a site for a new municipal hospital. The farm contains 58 acres and will cost $1,160,000.

A Low Death Rate.—Statistics of the bureau of health for 1902 show a death rate of 17.67 per 1,000. This is the lowest rate since 1879, when it was 17.17 per 1,000. The prevalence of smallpox throughout the city last year added materially to the death rate.

Vacancy on House Staff.—A vacancy exists on the staff of the assistant visiting physicians to the Methodist Episcopal Hospital. Candidates must have the degrees of both A.B. and M.D. The assistant visiting physician is chief of the medical clinic for three months of each year.

Lectures on Tropical Hygiene.—Arrangements have been made by the trustees of Jefferson Medical College for Captain Charles F. Keifer, assistant surgeon, U. S. A., to deliver to the senior class of the college a series of eight lectures on tropical hygiene, limited to a consideration of purely tropical diseases.

More Money for Hospitals.—By the will of the late James Wilson a bequest of $1,000 is made to the Presbyterian Hospital.——In the distribution of a balance from the estate of Thomas Elkinton the following institutions receive $5,000 each: Jefferson Hospital, Orthopedic Hospital, Polyclinic Hospital, and Hospital of the University of Pennsylvania.

Staff Reappointed.—At a meeting of the Board of Charities and Correction, held December 30, the entire medical and surgical staff of the Philadelphia Hospital were reappointed. for 1903. The following new appointments were made: Bacteriologist, as associate to Dr. L. Napoleon Boston; Dr. Randle C. Rosenberger; neurologist-registrar, Dr. T. H. Weissenberg.

College of Physicians Election.—At the annual election of officers by the College of Physicians, held January 7, the following were chosen: President, Dr. Horatio C. Wood; vice-president, Dr. Arthur V. Meigs; censors, Drs. Richard A. Cleeman, S. Weir Mitchell, Horace Y. Evans, Louis Starr; secretary, Dr. Thomas R. Neilson, and treasurer, Dr. Richard H. Harte.

Children's Hospital Staff.—At a meeting of the board of directors of the Children's Hospital, recently held, Dr. C. Y. White was appointed pathologist to take the place of Dr. Alfred Hand, Jr., who lately resigned; Dr. D. J. Miller was appointed visiting physician, instead of Dr. Alfred Stengel, resigned; and Dr. J. Claxton Gittings was appointed physician to the dispensary.

Death and Disease.—Scarcity of coal and the low water supply are perhaps largely responsible for the unusual number of cases of pneumonia and typhoid fever. During the week ended January 3, there were 90 deaths from pneumonia, 144 new cases of typhoid fever, and 13 new cases of smallpox. Orders have been issued to the vaccine physicians to begin a house-to-house canvass for the purpose of vaccination.

Typhoid, Smallpox and Pneumonia.—Typhoid fever may be said to be epidemic. For the week ended January 10, 217 new cases were reported. During the eight weeks previous to this date, 906 new cases developed. The low condition of the water in some of the reservoirs is thought to be a large causative factor. Within the week mentioned, 33 new cases of smallpox developed, and 108 deaths from pneumonia occurred.

Bequests to Charities.—Fifty-nine charitable institutions of Philadelphia were left sums of money, amounting in all to $69,500, by the will of Henry C. Cochran. The charitable bequests do not become operative until after the death of the benefactor's mother. The Pennsylvania Hospital is to receive $10,000, $5,000 of which is to be applied toward improving the accommodations for the insane. The Presbyterian Hospital receives $5,000 to endow a bed, the trustees of the University of Pennsylvania $5,000 for the endowment fund of the hospital and the Medico-Chirurgical Hospital $1,000.

WISCONSIN.

Physicians and Midwives Profit.—The county clerk of Milwaukee County has begun the annual payment of fees to physicians and midwives for filing certificates of births and deaths during the year ended Nov. 1, 1902. Nearly 600 orders will be issued, calling for $5,292.50.

Irregulars and Irregularities.—Henry Spencer, who practiced medicine in Rozellville under the name of Dr. Charles A. Clark, and was charged with making false representations to the State Board of Medical Examiners, to secure a license to practice, pleaded guilty, January 5, and was sentenced to one year's imprisonment in the House of Correction.——Adolph W. Dude, Milwaukee, under arrest on suspicion of having performed an illegal operation, has acknowledged that he is not a regularly licensed practitioner in the state.

Personal.—Dr. Alfred Elliott, who recently returned from Germany, has been appointed assistant house physician at the Oakwood Sanitarium, Lake Geneva.——Dr. H. Browall, assistant at Raon's Hospital, Merrill, has resigned.——Dr. Solon Marks, Milwaukee, for over a quarter of a century a member of the State Board of Health and for the greater part of that period president of the board, has been succeeded by Dr. Cornelius A. Harper, Madison.

The Right to Quarantine Smallpox.—On January 7, a temporary injunction was granted by the Outagamie County Circuit Court restraining the board of health of Appleton from removing to the pesthouse Mrs. Elizabeth Leonhardt, alleged to have smallpox. The complaint in the case, made by the woman and her husband, alleges that the board of health is not legally organized under the statutes of the state, and has no authority to quarantine or to confine in a pesthouse. There are now more than 20 cases in the pesthouse, and if that is closed by permanent injunction, it is threatened that a shotgun quarantine may be instituted.

GENERAL.

Mazatlan Plague Severe.—There is no spread of the plague yet reported from Mexico. Mazatlan is, however, unable thus far to stop the ravages of the disease in the city itself. Wholesale disinfection by burning all infected houses has been begun.

Chicago Most Healthful City.—For the seventh successive year, Chicago's death rate is lower than that of any other city of first magnitude. The death rate per 1,000 inhabitants of New York City (Manhattan and Bronx) was 19.18; of Boston, 18.58; Greater New York, 18.28; Philadelphia, 17.85; Chicago. 14.49. Chicago's infant and child mortality is the lowest of any city of its size.

Danish Tuberculosis Commission.—The royal commission which has been investigating tuberculosis recommends rigid laws. Some of the points proposed are: Reporting of cases, compulsory confinement of recalcitrant patients in special institutions, prohibition of infected persons from acting as nurses, teachers or physicians, erection of municipal phthisis hospitals, the state bearing half the cost and the extremely poor being treated free of charge.

Medical Member of the Isthmian Canal Commission.—The following is the text of the resolutions which we stated last week were adopted at the meeting of the American Association for the Advancement of Science, in Washington:

WHEREAS, The construction of the Isthmian canal is through a region in which without energetic sanitary control there is sure to be enormous loss of human life from preventable diseases, particularly from pernicious malaria and yellow fever, as well as great waste of energy and of money from disabilities caused by such diseases, and

WHEREAS, The measures for the restraint of these diseases, which have already achieved even their partial extermination in Cuba under American administration, require expert knowledge based on practical familiarity with tropical diseases, experience in the application of these measures, and large authority in their administration,

Resolved, That the American Association for the Advancement of Science begs most respectfully and earnestly to call to the attention of the President of the United States the importance of appointing as a member of the Isthmian Canal Commission a medical man possessed of the qualifications indicated. The association is convinced that the mere employment of such a sanitary expert by the commission will not be likely to secure the desired results.

Resolved, That the permanent secretary of the association transmit a copy of these resolutions to the President of the United States.

CANADA.

British Columbia Plague Quarantine.—Dr. A. T. Watt, superintendent of the British Columbia quarantine, has given notice of the establishment of new regulations on account of the epidemic of bubonic plague at San Francisco. The various steamers plying between San Francisco and Canadian ports have been notified and are warned to use funnels on their mooring lines at San Francisco to prevent rats coming on board.

Appointments at Trinity.—The Anatomy Department of Trinity Medical College has to a great extent been rearranged. Dr. George A. Bingham is now professor of anatomy as well as lecturer on surgical anatomy; Dr. Charles B. Shuttleworth, who recently returned from England, where he secured the Fellowship of the Royal College of Surgeons by examination,

has been appointed associate professor; Dr. T. Bedford Richardson, first senior assistant; Dr. George Elliott, second senior demonstrator, and Dr. Charles P. Lusk, third senior assistant demonstrator.

New Brunswick News.—About 800 patients were treated at the General Public Hospital of St. John during 1902.—— Dr. Thomas Walker has resigned as vice-president and treasurer of the General Public Hospital Commission of St. John.—— During the year 1902 there were reported 219 cases of contagious disease to the St. John Board of Health. The number of deaths in 1902 was 27 less than in 1901.——Dr. W. L. Ellis, the newly-appointed physician at the port of St. John, on December 31, ordered the deportation of some sixty immigrants who came over on the Elder-Dempster Line. Most of them were afflicted with trachoma.

FOREIGN.

The London influenza epidemic is rapidly decreasing.

Many British Insane.—The lunacy returns for 1902 show 148,631 in the United Kingdom and 110,713 of these were in England. The official view is that the increase is more apparent than real; that the case is rather one of accumulation; that if there be an increase it is not out of proportion to the increase of population. Mr. W. J. Corbet, however, thinks there is an alarming actual increase, and in an article in the January *Westminster Review* recommends an international conference to discuss means to check insanity.

Sydney Plague Prophylaxis.—In view of the state of affairs at San Francisco with regard to bubonic plague, the Sydney Board of Health decided, December 2, to enforce the regulations, without exception, concerning ships that have touched at plague ports. San Francisco has been made an exception, but the board fears to continue this plan. Vessels, however, that have consular certificates as to supervision of loading and as to having been properly fended off from the wharf to prevent rats from boarding, may be admitted as free from suspicion. Sydney does not want another taste of the plague.

LONDON LETTER.

A Galloping Field Hospital.

In distributing the prizes to the successful members of the Manchester Royal Army Medical Volunteers, Sir F. Treves put forward a novel proposal. The conflict in South Africa, he said, had shown the impossibility of supporting any army medical corps on a war footing. Wealthy as the country was, it could not bear the expenditure. The comparatively slight alteration that the recent commission had introduced into the corps would cost $500,000. In time of war the Army Medical Service must turn to volunteer aid, which, to be of any use, must have been organized. In connection with the Ladysmith relief column, to which he was attached, he felt how infinitely more serviceable the surgeons with the volunteer aid column would have been had they had a volunteer medical training. One weak point in the Army Medical Service was shown in the late war. There was no unit or outfit capable of following a rapidly moving cavalry column. He hoped that some rich philanthropist would provide means for experimenting in that direction and organizing practically a galloping field hospital. The problem had to be solved and it would be an exceedingly expensive one unless assistance was given by the generosity and enterprise of some wealthy man.

Sleeping Sickness.

Dr. Low, research scholar of the London School of Tropical Medicine and leader of the Royal Societies' Commission sent out by the government to investigate sleeping sickness, has returned to England. He states that the epidemic of sleeping sickness now raging in Uganda is of serious importance to that protectorate, and to the adjacent one of British East Africa. Though only detected a few years ago, it has now extended over a large area and is computed to have killed 20,000 to 30,000 people. It is spreading to new areas, and its virulence is apparently on the increase. The scientific reports of the commission are the property of the Royal Society and will be published in due course, but in the meantime it may be stated that the commission believe they have isolated the microbe that causes the disease. A scheme for the isolation of fresh cases occurring in new districts has been adopted. So far no white person has been attacked. Necropsies have demonstrated that one of the features of the disease is inflammation of the brain and its membranes. The course may be acute or chronic; in the latter case the duration may be six or seven months.

PARIS LETTER.

Microbiology of Gonococcic Arthritis.

Professor Vaquez and Dr. Laubry have had occasion recently to study the condition of joints affected by gonococcic arthritis, and the results obtained show that the bacteriologic condition is not the same in all cases. In two patients suffering from plastic mono-arthritis, and in a case of hydrarthrosis there were no gonococci, but in a purulent arthritis the gonococci were found. In another, where the examination of the synovial liquid had shown no gonococci, a culture inoculated with the synovial fungosities gave a large number of colonies of gonococci. This has already been demonstrated by Burci, and shows that the microbe may die quickly in the synovia and remain localized in the solid tissues.

Permanganate of Potash in Local Tuberculosis.

Dr. Bayeux, a former house physician of the Paris hospitals, and who is well known for his work on diphtheria and intubation, has been advocating the use of permanganate of potash in suppurative lesions of tuberculous origin. On recent ulcerations he uses a concentrated 2 per cent. solution. Chronic abscesses are washed out three times a week with a 1 in 500 or a 1 in 1,000 solution. He also employs as dressing compresses dipped in 1 per 1,000 solution of permanganate of potash.

Operation for Cancer of the Esophagus.

Dr. J. L. Faure, surgeon at the Hotel Dieu, performed two or three weeks ago an operation for cancer of the esophagus, which, I believe, has never been undertaken before. The tumor was situated in the mediastinum, and the patient had already been operated on for gastrotomy and was in an emaciated condition. Dr. Faure began by making an incision in the anterior cervical region and liberating the esophagus, a catgut being placed around it. The patient was then turned over on the back, and an incision made between the right scapula and vertebral column. Five or six ribs were excised, including the first, and through the deep aperture thus made, the esophagus was dissected and removed. The patient died the next day. Dr. Faure is a clever operator; it is, however, a question whether the operation was justified by the condition of the patient.

Bad Bread in Paris.

Dr. de Lavarenne, the editor of the *Presse Médicale*, has recently published an article on the quality of the bread sold in Paris, in which he shows that the latter is far from nutritious and not easily digested. New methods have been discovered whereby the albuminous and fatty part of bread may be more readily retained, and by comparing the analysis of the two kinds of bread, one is struck by the following figures: Albuminous bodies, 10.25, as against 6.75. Fat, 5.02, as against 0.8, and dextrine, 10.61, as against 3.43. Mineral salts, 3.13, as against 0.4. These figures are quite convincing, and show how justified are the complaints which one so often hears in connection with this subject.

Importance of Medical Men in Politics.

It is a noteworthy fact that medical men play a much more important political rôle in continental countries than in either England or the United States. Such an illustrious example as Virchow illustrates this. In the French republic there are fully forty or fifty deputies who are physicians, and the minister of the interior, Dr. Combes, is a medical man. The president of the Swiss confederation, Deucher, is also a physician, and is about to begin his third term of office.

The Figaro's Sanatorium Subscription.

The *Figaro*, one of the most important French dailies, has just started a subscription list for the establishment of sanatoria for consumption, and already over a million francs have been contributed. Emma Calvé, the celebrated singer, has long furnished the funds for a sanatorium situated in the Aveyron a part of France from which she comes. This sanatorium is built for about forty girls from 6 to 12 years old suffering from some chronic disease. They are kept for about two months and then returned to their parents. Another well-known sanatorium for children has been established at Hendaye, on the southern coast of France, and is for scrofulous and tuberculous children.

Eichhorst's Opinion on the Treatment of Diabetes.

At a meeting held by the Medical Society of Zurich, Dr. Eichhorst gave an "exposé" of his ideas on the treatment of diabetes by drugs and mineral waters. Dr. Eichhorst has tried various drugs on patients who were either following their usual

regimen or else a special antidiabetic diet, and he has come to the conclusion that they were of no efficacy. The drugs employed were salicylic acid, salol (which has been recommended by Ebstein), phenic acid, antipyrin, and even mercury and the iodids when there was syphilis. As for the results obtained at Carlsbad and Neuenahr, they would be due to the strict mode of life followed. Dr. Eichhorst considers there is but one real treatment of diabetes, and that is the special diet. He never advocates changing the diet suddenly, as he has seen diabetic patients in whom the sudden suppression of farinaceous food has caused the appearance of acetone in the urine. He prefers that a diabetic patient should be in good condition and have a little sugar in the urine, rather than one who is growing thin and weak on account of too severe a diet. His patients are weighed regularly, as this is one of the best means of noting any change. He does not favor the use of alcohol, which can be advantageously replaced by various fats such as butter, cream, ham, cheese. Light tea or coffee are permissible. Eichhorst's treatment, therefore, consists in the progressive use of a special diet.

Too Many Physicians in France.

The *Temps*, the most important daily published in Paris, published an article recently on the number of physicians in France. Professor Debove, the dean of the Paris faculty, had said there were too many physicians in France, as quoted in THE JOURNAL last week, page 109. The author of the article in The *Temps* remarked that what was needed was to have good physicians, and not to create a special profession for those who are favored by fortune. Moreover, if one examines the list of great physicians in France, one does not find that many began life with a capital to fall back on. Professor Peter, for instance, was a journeyman printer, and to come to those of more recent fame, a well-known physician of the hospitals was formerly an employe of the Bon Marché, and a surgeon whose name is seen very often was a simple usher in a public school.

Smallpox at Nice in 1901-1902.

At a meeting of the Academy of Medicine, held December 16, Dr. St. Yves-Menard, the well-known vaccination specialist, read a report by Dr. Balestre on the recent epidemic of variola in Nice (1901-1902). There were 1575 cases and 549 deaths. The disease began in the poorer quarters, and the vaccination of the regiment quartered in the town had a good effect, there being fewer cases of contagion among the men than among the women.

There was a vacancy for a seat in the section of medical pathology, and Dr. Chauffard, who is specially known for his work on the liver, was chosen by 65 votes out of 75.

Correspondence.

Was It Beri-beri?

NEW YORK, Jan. 10, 1903.

To the Editor:—For the information of Dr. Frank Fenwick Young, whose interesting experiences with "Beri-beri in Louisiana" you have published in THE JOURNAL, kindly print the fact that beri-beri has been found on ships reaching this port, all with carbon-producing cargoes (sugar, graphite, burnt Java coffee, etc.), whose crews had as their dietary *no rice at all* for the entire voyage. Dr. Judson Daland also found such an outbreak of beri-beri, on a sugar ship, too, which reached Philadelphia, whose crew were Lascars; that is, pork eaters.

In an interesting investigation which I made many years ago with Col. John Screven of Savannah, Ga., the largest rice grower in the world, we found no beri-beri in those connected with the culture of rice, but plenty of malarial rheumatism (multiple neuritis, perhaps,) in those who did not take proper precautions while cultivating the flooded grounds. The feet of all rice cultivators are especially exposed to infections, but I did not find any of those who ate rice to have "multiple neuritis," or anything else that other people might not have had. Nor in Japan, where I treated thousands of rice cultivators from the province of Owamori (the farmers' province) there was no more beri-beri than in and about Tokio itself.

I have made a comparison of "Rice Culture in Japan, Mexico and the United States," which was published by the *Sei I Kwai*, some years back, in which I showed that the main danger from rice fields and rice culture was typhoid fever from human excrement, which was used as manure. Therefore, eating rice, even imperfectly cooked, could not produce beri-beri by itself; it would be accompanied by typhoid fever. But in the Orient all rice is most thoroughly cooked, which destroys every germ. If rice was, as diet *per se*, the cause of beri-beri, it should affect as well those who live on high grounds and mountains. Beri-beri never attacks even the higher wards of Tokio, which shows that the poison of beri-beri is heavier than air. Rice diet is not, therefore, the cause of beri-beri. Dr. Young will not find his "beri-beri" in those Louisianians who eat even nothing but rice and who live on high ground; that is, if the disease he describes is true beri-beri and not some foot infection. Beri-beri does not limit itself to "a radius of 20 miles," and could not have an outlined geographical limitation if it was due to the eating of rice. Beside this, there is no anemia, no fever in beri-beri. ALBERT S. ASHMEAD, M.D.

Method of Yellow Fever Transmission.

NEW ORLEANS, Jan. 7, 1903.

To the Editor:—In THE JOURNAL (Jan. 3, 1903, page 50) is a report of the discussion, at the recent session of the American Public Health Association, of the method of transmission of yellow fever. THE JOURNAL can not, of course, publish a full report of such a discussion, and the report published, therefore, must necessarily be incomplete and imperfect. Your reporter has placed me in a position which I do not desire to occupy. I am sure the error would ordinarily be considered a matter of small importance not worthy of correction, but my convictions on the subject of quarantine against yellow fever are so strong, and my interest in the subject so intense that I beg the privilege of correcting your report in so far as it refers to myself.

What I said was that "Quarantine should be *most* strenuous against that which has been *proven* infectious even at the expense, if necessary, of those measures employed against that which is only *suspected;* where measures against both fomites and mosquitoes can be operated no valid excuse can be urged for neglecting the mosquitoes."

The idea intended to be conveyed was that quarantine against yellow fever *should be* what it *was not*. While the treatment for fomites in transportation may or may not be important, the treatment for mosquitoes undoubtedly is of the greatest importance, and should be given the highest consideration by quarantine authorities. To neglect the obvious application of the mosquito theory to quarantine practice is an unpardonable mistake. Whether or not fomites may convey the disease, the quarantine of the future to be efficient against yellow fever *must* afford protection against the mosquito.

Respectfully, QUITMAN KOHNKE, M.D.,
Health Officer of the City of New Orleans.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

DOES NOT ENDORSE GOAT LYMPH COMPANY.

PHILADELPHIA, Dec. 31, 1902.

To the Editor:—You will greatly oblige me by stating in your columns that the endorsement by me set forth in the circular of the Goat Lymph Sanitarium Association of Chicago, is fictitious, and any mention of my name in connection with the enterprise, is entirely unauthorized. ALBERT MCCONAGHY.

RELATIONS OF DIAMETERS IN O. L. A. POSITION.

Dec. 22, 1902.

To the Editor:—Please mention in your query column what diameters of the fetal skull are engaged in the oblique diameters of the pelvis in L. O. A. cases. Y.

ANS.—When the head is O. L. A. and in moderate flexion, the occipito-frontal diameter lies in the right oblique diameter of the pelvis. The biparietal diameter of the head which lies at right angle to the occipito-frontal does not lie in the left oblique because the two oblique diameters of the pelvis do not cross at right angles.

With moderate flexion and synclitism the diameter of the head which lies in the left oblique of the pelvis is one that passes from the left parietal protuberance (or boss) through the right frontal protuberance (or boss).

Marriages.

WILLIAM RUPP, M.D., to Miss Elcanor M. Turner, both of Chicago, Dec. 24, 1902.

HARRY W. WARDLE, M.D., to Miss Helen Prince, both of Chicago, Dec. 25, 1902.

PATRICK J. MURRAY, M.D., to Miss Mary F. Murray, both of Brooklyn, Dec. 30, 1902.

EUGENE CLOWER, M.D., Moultrie, Ga., to Miss Pearl Wight of Cairo, Ga., January 7.

C. G. HOLLAND, M.D., to Mrs. Dan Franklin, both of Newport, Tenn., Dec. 16, 1902.

PAUL S. SCHOLES, M.D., to Miss Bertha Chapman, both of Canton, Ill., Oct. 15, 1902.

JAMES J. BURCH, M.D., to Miss Lula Bussey, both of Double Branches, Ga., Dec. 23, 1902.

T. E. BRADLEY, M.D., Nashville, Ga., to Miss May Combs of Adairsville, Ga., Dec. 30, 1902.

OSCAR N. CARTER, M.D., to Miss Annie Laura Hosey, both of Brookline, Mo., Dec. 24, 1902.

JOHN M. NEELY, M.D., Elmwood, Neb., to Miss Edna Perry of Ashland, Neb., Dec. 30, 1902.

SMITH HOLLINS MCKIM, M.D., to Miss Margaret Emerson, both of Baltimore, Dec. 30, 1902.

HANSELL CRENSHAW, M.D., to Miss Carolyn Proctor Ollinger, both of Atlanta, Ga., January 1.

FRANK B. MAYNARD, M.D., to Miss Emma Marie Lester, both of Rochester, N. Y., Dec. 17, 1902.

JAMES G. HARRISON, M.D., to Miss Lillian Middlebrooks, both of Sparta, Ga., Dec. 17, 1902.

A. WALTER JONES, M.D., to Miss Vida Luena Wingerter, both of Akron, Ohio, Dec. 31, 1902.

CLYDE O. DONALDSON, M.D., to Miss Nettye W. Burns, both of Kansas City, Mo., Dec. 17, 1902.

FREDERICK S. HAEBERLE, M.D., St. Louis, to Miss Helen Carter of Nashville, Ill., Dec. 17, 1902.

ARNE OFTEDAL, M.D., Bisbee, N. D., to Miss Josephine Olson, at Cando, N. D., Dec. 10, 1902.

DUNCAN C. MCLEAN, M.D., Deckerville, Mich., to Miss Libbie McNair of Worth, Mich., Dec. 18, 1902.

OSCAR B. BELLER, M.D., Garrison, Iowa, to Miss Alfreda Stocker of Vinton, Iowa, Dec. 30, 1902.

JOHN VINCENT LIITIC, M.D., to Miss Bessie Barr Cassell, both of Davenport, Iowa, Dec. 17, 1902.

LAWRENCE B. COHNE, M.D., Baltimore, to Miss Becky Esther Bernstein of New York City, Dec. 16, 1902.

THOMAS PINCKNEY WARING, M.D., to Miss Martha Gallaudet Backus, both of Savannah, Ga., Dec. 24, 1902.

GEORGE F. POTTRIGER, M.D., Hamburg, Pa., to Miss Florence L. Ritter of West Reading, Pa., Dec. 28, 1902.

HARVEY BURTON UPCHURCH, M.D., Carrollton, Ala., to Miss Mary Edna Spragins of Jackson, Tenn., January 7.

HARRY SHERWOOD ALLEN, M.D., Gallipolis, Ohio, to Miss Alma Roberts Thomas of Ironton, Ohio, Dec. 30, 1902.

JULIUS STERLING LOOMIS, M.D., South Windsor, Conn., to Miss Nellie Bean of New Haven, Conn., Dec. 24, 1902.

EDWIN J. CHAMBERLAIN, M.D., Grand Rapids, Mich., to Miss Margaret d'Hays Walker of Louisville, Ky., Dec. 31, 1902.

GEORGE T. DRENNON, M.D., Clarksville, Tenn., to Miss Cyrenne Stephens of Thompson Creek, Tenn., Dec. 17, 1902.

ELBERT LOGAN WRIGHT, M.D., Parkersburg, W. Va., to MIS. Anna Dusenberry of Buffalo, N. Y., at Parkersburg, W. Va., Dec. 16, 1902.

Deaths.

Irving S. Vallandingham, M.D. University of Maryland, Baltimore, 1862, died at his home in Middletown, Del., Dec. 30, 1902, aged 62. He served in the Confederate Army as assistant surgeon, and had been a member of the State Board of Health, secretary of the State Medical Council and a trustee of Delaware College, and was a member of the American Medical Association.

Julius Kohl, M.D. St. Louis Medical College, 1859, a member of the American Medical Association, formerly a member of the Illinois State Board of Health, and for 36 years a resident of Belleville, Ill., died at his home in that city, January 4, from a cancer of the stomach, after a long illness, aged 64.

Henry H. Howland, M.D. University of the City of New York, 1878, a member of the American Medical Association, and at one time a prominent laryngologist of Denver, died instantly in that city as the result of a self-inflicted gunshot wound, while despondent from ill health, Dec. 27, 1902, aged 53.

Marcus A. Bogie, M.D. Long Island College Hospital, Brooklyn, N. Y., 1864, chief surgeon of the Kansas City Belt Railway and a member of the International Association of Railway Surgeons, died at his home in Kansas City, January 4, from apoplexy, after an illness of two days, aged 62.

Colin A. McPhail, M.D. Trinity Medical College, Toronto, 1892, vice-president for Prince Edward Island of the Canadian Medical Association and treasurer of the Maritime Medical Association, died suddenly at his home in Summerside, Dec. 3, 1902, from apoplexy, aged 39.

Charles Edmond Chase, M.D. University of Vermont, Burlington, 1873, president of the Middlesex East District Branch of the Massachusetts Medical Society, died at his home in Woburn, Mass., Dec. 26, 1902, after a lingering illness, from Bright's disease, aged 53.

Henry Van Ostrand, M.D. Geneva (N. Y.) Medical College, 1843, assistant surgeon to the First Michigan Engineers and Mechanics during the last two years of the Civil War, died at his home in Yankton, S. D., Dec. 26, 1902, after an illness of about one year, aged 84.

John B. Amiss, M.D. New York University, 1858, a member of the National Association of Railway Surgeons, and local surgeon of the B. and O. Ry., at Harrisonburg, Va., died suddenly at his home in that place, January 4, from angina pectoris, aged 68.

William C. Gallagher, M.D. Bellevue Hospital Medical College, New York, 1886, for several years on the house staff of St. Francis' Hospital, New York City, died at the New York Hospital, January 5, from typhoid fever, after an illness of nine weeks, aged 40.

Byron Chapman, M.D. Western Reserve University, Cleveland, 1847, a member of the American Medical Association and a pioneer citizen and practitioner of Summit County, Ohio, died at his home in Copley, Dec. 6, 1902, after an illness of six days, aged 81.

Ralph Brooks, M.D. University of Pennsylvania, Philadelphia, 1897, first assistant physician at the National Soldiers' Home, Hampton, Va., died in the hospital of that institution, January 4, five days after an operation for appendicitis, aged 27.

Robert E. Williams, M.D., late captain and assistant surgeon, U. S. V., University of Georgetown, Washington, D. C., 1870, died at the U. S. General Hospital, Presidio of San Francisco, from cirrhosis of the liver, Dec. 30, 1902, aged 58.

Charles A. Osborne, M.D. Buffalo Medical College, surgeon of the Eleventh Michigan Cavalry in the Civil War, died at his home in Owosso, Mich., January 2, from paralysis, after a long period of invalidism, aged 70.

Lewis P. Wheat, M.D. Medical College of Virginia, Richmond, 1881, died at his home in that city from heart disease, Dec. 29, 1902, after a short illness, aged 42. He was formerly assistant to Dr. Hunter McGuire.

Alexander Young Scott, M.D. Trinity Medical College, Toronto, 1887, died suddenly, January 3, at his home in Toronto, from myocarditis following an attack of typhoid fever two years before, aged 41.

James Beahan, M.D. Jefferson Medical College, Philadelphia, 1852, who had been out of health for a long time, died at his home in Rochester, N. Y., January 3, from the effects of a fall two weeks before, aged 80.

Nesbitt Frederick Jordan, M.D. Medical College of Ohio, Cincinnati, 1884, died at his home in Bloomington, Ill., Dec. 28, 1902, from pneumonia following typhoid fever, after an illness of four weeks, aged 45.

C. W. Hopkins, M.D. McGill University, Montreal, 1901, medical superintendent of the Montreal Maternity Hospital, died, Dec. 28, 1902, in that city from typhoid fever, after an illness of five weeks.

William H. Haviland, M.D. Starling Medical College, Columbus, Ohio, 1889, died at his home in Columbus, Dec. 30, 1902, from tuberculosis, after an illness of eighteen months, aged 38.

Charles **J. Bell,** professor of chemistry in the University of Minnesota medical department, Minneapolis, died at Somerville, Mass., January 4, from Bright's disease, aged 48.

Waldo **E. Clark, M.D.** Detroit College of Medicine, 1887, is supposed to have committed suicide by drowning, Dec. 29, 1902, aged 45. His body was found in the ice at Saginaw, January 6.

Harrison **S. Walrath, M.D.** College of Physicians and Surgeons, Chicago, 1883, an invalid for many months, died suddenly at his home in St. Paul, Minn., Dec. 21, 1902, aged 60.

Charles **H. Black, M.D.** Jefferson Medical College, Philadelphia, 1875, died at his home in Turtle Creek, Pa., January 2, from stomach trouble after an illness of ten weeks, aged 53.

Sherburne **Choppin, M.D.** Tulane University, New Orleans, 1886, died from pneumonia in the Charity Hospital, New Orleans, Dec. 30, 1902, after an illness of eleven days, aged 44.

Louis **Charette, M.D.** Albany (N. Y.) Medical College, 1852, who retired from practice in 1895, died at his home in Glens Falls, N. Y., from gastroenteritis, Dec. 26, 1902, aged 87.

Allen **George Berry, M.D.** Kentucky School of Medicine, Louisville, 1886, died at his home in Ashland, Ky., from tuberculosis, after a long illness, Dec. 30, 1902, aged 43.

Charles **W. Hedges, M.D.** Vanderbilt University, Nashville, Tenn., 1901, died at his home in Newkirk, Okla., Dec. 21, 1902, ten days after an operation for appendicitis, aged 26.

Ralph **G. Morgan, M.D.** Medical College of Indiana, Indianapolis, 1898, died at his home in that city, January 1, from peritonitis, after an illness of two weeks, aged 29.

D. B. **Hall, M.D.** University of Michigan, Ann Arbor, one of the earliest graduates of that institution, died recently, aged 75, and was buried at Ithaca, Mich., Dec. 24, 1902.

John **Emil Palmquist, M.D.** University of Minnesota, Minneapolis, 1896, died from tuberculosis at his home in Holdredge, Neb., Dec. 21, 1902, after a long illness, aged 32.

John **Stevens, M.D.,** Philadelphia, 1872, the oldest practitioner of Bangor, Me., died at his home in that city from dilatation of the heart, Dec. 21, 1902, aged 67.

William **E. Brownell, M.D.** New York University, 1879, died at his home in New Bedford, Mass., Dec. 27, 1902, from uremia, after an illness of nine days, aged 45.

James **H. Lowe, M.D.,** Philadelphia, for many years a practitioner of New York City and Atlanta, Ga., died at his home in the latter city, January 2, aged 82.

William **Scott White, M.D.** University of Virginia, Charlottesville, 1875, died at his home in Lexington, Va., Dec. 29, 1902, from Bright's disease, aged about 50.

William **Scott, M.D.** University of Virginia, Charlottesville, died at his home in Lexington, Va., after a long illness, from Bright's Disease, Dec. 29, 1902, aged 50.

L. E. **Towne, M.D.** Rush Medical College, Chicago, 1868, died at his home in Broadhead, Wis., January 6, from paralysis, after an illness of two years, aged 76.

Schuyler **F. Shidler, M.D.** College of Physicians and Surgeons, Chicago, 1888, died a few hours after a fall from his horse, near Sheridan, Mo., January 3.

Carl **Schumacher, M.D.** Cleveland University of Medicine and Surgery, 1883, died at his home in Syracuse, N. Y., after an illness of nine months, January 3.

H. S. **Osborn, M.D.** Cincinnati Medical College, for many years a practitioner of Bozeman, Mont., died at Denver, Nov. 22, 1902, after a long illness, aged 80.

Daniel **P. Buckey, M.D.** Baltimore Medical College, 1894, Flemington, W. Va., was run over by a train and instantly killed at Flemington, Dec. 29, 1902.

Angus **C. McDonnell, M.D.** McGill University, Montreal, 1852, one of the leading physicians of Montreal, died from pneumonia, January 2, aged 74.

Robert **G. Petway, M.D.** Nashville (Tenn.) Medical College, 1855, died suddenly from heart disease at his home in Nashville, Dec. 24, 1902, aged 68.

Charles **S. Hoover, M.D.** University of Maryland, Baltimore, 1884, was found dead, January 4, in his office in Ottawa, Ill., from an overdose of cocain.

Simon **M. Landis, M.D.** American College of Medicine in Pennsylvania, Philadelphia, 1854, died at his home in Boston, Mass., Dec. 25, 1902, aged 73.

William **C. Cole, M.D.** New York University, 1843, died at his home in Van Wert, Ohio, January 1. He served through the Civil War as surgeon.

William H. Middleton, M.D. Washington University, St. Louis, 1866, died at his home in Camden Point, Mo., after a long illness, Dec. 25, 1902.

James E. DeWolf, M.D. Harvard University, Boston, 1866, died suddenly at his home near Baraboo, Wis., from heart disease, January 5, aged 60.

Joseph Huff, M.D. Western Pennsylvania Medical College, Pittsburg, 1901, died from smallpox at the Municipal Hospital, Pittsburg, Dec. 30, 1902.

J. Henry Rider, M.D. Missouri Medical College, St. Louis, 1870, died from pneumonia at his home in Cape Girardeau, Mo., Dec. 23, 1902, aged 61.

T. L. Webb, M.D. Georgia College of Eclectic Medicine and Surgery, 1889, died at his home in Cookeville, Tenn., Dec. 24, 1902, aged about 50.

J. W. Summers, M.D., an old practitioner of Cameron, S. C., died at his home in that place, after a long illness, Dec. 28, 1902, aged 65.

Ernest W. Bradley, M.D. Hahnemann Medical College, Chicago, 1879, died suddenly, Dec. 28, 1902, at Grass Valley, Cal., aged 48.

W. W. Watkins, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1882, died at his home in Carthage, Mo., January 2, aged 75.

Ephraim W. Gantt, M.D. College of Physicians and Surgeons, New York, died at his home in Lockport, N. Y., January 5, aged 72.

William J. Deane, M.D. University of Buffalo, N. Y., 1895, of Buffalo, died at Kingston, Dec. 31, 1902, from tuberculosis, aged 36.

H. Van Gerhart, M.D. Missouri Medical College, St. Louis, died in San Diego, Cal., Dec. 28, 1902, from heart disease, aged 29.

William R. Grove, M.D. University of Maryland, Baltimore, 1865, died at his home in Columbia, Pa., January 3, aged 65.

William L. Dennison, M.D. Detroit College of Medicine, 1894, died at his home in Clarkston, Mich., Dec. 28, 1902, aged 30.

James T. Scott, M.D. Missouri Medical College, St. Louis, 1854, died at his home in Paynesville, Mo., Dec. 28, 1902, aged 70.

William Bevier, M.D. Eclectic Medical Institute, Cincinnati, 1852, died at his home in Waterloo, Ind., Dec. 29, 1902, aged 80.

William A. Looney, M.D. Rush Medical College, Chicago, 1868, died at his home in Vienna, Ill., January 5, aged 74.

William R. Freeman, M.D. University of Nashville, Tenn., 1871, died at his home in Bellbuckle, Tenn., January 1.

J. J. Arendale, M.D. University of Tennessee, Nashville, 1894, was shot and killed at Waller, Texas, January 5.

David Jacobson, M.D. New York University, 1887, died, Dec. 31, 1902, at his home in New York City, aged 38.

D. D. Davisson, M.D., the oldest practitioner of Madison County, Iowa, died recently at Winterset.

Arthur J. Padron, M.D., died at his home in New Orleans, Dec. 30, 1902, after a lingering illness.

Miscellany.

Blue Toes.—Dr. Arthur Hall, Sheffield, England, has described cases of blue toes which at first were completely baffling to all attempts to learn their cause. It was found that acid perspiration decomposed the black dye of the stockings. The discoloration appeared between the toes. In another case a woman who wore a dark purple blouse had discoloration of the axillæ, while the arms and parts of the body in contact with the blouse were uncolored. These facts led to the suspecting the dye and proving it to be, in connection with the sweat, the source of the phenomenon.

Official Warning Against Charlatans.—The local board of health of Carlsruhe has issued two official announcements warning against a certain herb doctor who has been advertising in the lay press and an electric institute advertised to cure all kinds of diseases. The warning states that it is

impossible for the herb doctor to make a correct diagnosis by letter, as he claims, and that his tea, liqueur and ointment have no curative value, while they cost twice as much as a physician's advice and prescription. As his practices defraud suffering persons the board urgently warns against applying to the herb doctor in question. The electric institute, it also explains, was at first under the supervision of a regular physician, but he has retired, and the proprietor, originally a butcher, is now in charge.

End of Garnault's Experiment.—THE JOURNAL has mentioned Garnault's two inoculations of his arm with fragments from a tuberculous lesion in the liver of a cow with advanced tuberculosis. Indurated nodules developed at the points inoculated, and the pus contained tubercle bacilli virulent for guinea-pigs for several months. Garnault thinks that he has established his contention that bovine tuberculosis inoculated into man will produce human tuberculosis. He therefore considers the experiment at an end and has had Tuffier extirpate the nodules. They were examined at the Pasteur Institute and found to be typical specimens of local tuberculosis, restricted to the points inoculated. Garnault is exceptionally robust, free from the slightest tuberculous antecedents, inherited or acquired, and he ingested 400 gm. of raw meat every day during the experiment. He is convinced that the inoculation would have induced general tuberculosis in a less resistant subject. No virulent bacilli were found after September at the points inoculated in June, but the bacilli were still virulent in the nodules inoculated in July. No reference was made to his experience at the recent Tuberculosis Conference except Koch's general statement that the local tuberculous lesions observed occasionally on persons handling bovine tuberculous material, were arguments against the transmission of bovine tuberculosis to man, as they are never followed by general infection, but always remain a mere circumscribed lesion, becoming more and more attenuated and gradually healing in time. Garnault's communications have been published in the *Gaz. Med. de Paris.*

The State Board and the Ohio Medical Colleges.—The *Cleveland Medical Journal* says editorially in its December number: The *Eclectic Medical Journal*, of Cincinnati, in its November issue publishes an editorial entitled "A Wrong to Ohio Colleges." By this caption it denotes the action of our State Board of Medical Registration and Examination in adding a little history, a little mathematics and a little English to the requirements for admission to the medical colleges of the state. It joins hands with the *Lancet-Clinic* in the effort to keep the educational standard of our profession at as low a notch as seems compatible with the well-recognized general professional demand for a high standard. The increase in required studies made by the board is too slight to justify the strong language of the two Cincinnati objectors. In a discussion of this sort it is well to lay bare the real facts at issue. The *Eclectic Medical Journal* is owned by the Scudder Brothers Company, who are also proprietors of the Eclectic Medical Institute of Cincinnati. This college, along with the other medical schools in Cincinnati, has felt keenly the effect of the raised entrance standard required by the present medical-practice act. This is, however, the first convenient opportunity for a public expression of alarm at diminishing classes. "It's the galled jade that winces." When the profession demanded a higher standard it knew very well that the medical colleges were to suffer, because we all knew that there were too many in the state and that they were graduating ill-prepared physicians. That the process now going on is painful for the colleges none can deny, but the profession can only point to the record of the colleges' own failure generally and materially to improve educational conditions. It is evident, too, that Cincinnati colleges have suffered more promptly from the raised standards, for the reason that their former large southern student clientele has been driven to the less exacting Louisville schools. Very fortunately the question is not at all one of therapeutic "schools," as the regular profession is in a minority on the state board. All this shows clearly enough to the disinterested observer that the rank and file of all branches of the profession favor a high educational standard, while many of those connected with the schools feel themselves compelled to adopt a different attitude. Nor is any question of intellectual or moral dishonesty involved—it is merely natural self-interest. However, the logic of the situation is evident and inexorable. There must be fewer schools. It is "up to" the colleges to determine how the reduction in number shall take place, and in Cleveland the problem is now practically solved. For years we have had too many colleges in Ohio, and it was expected that when the profession demanded a reduction there would be some shrieks of pain—and now we have them.

Book Notices.

THE PHYSICIAN'S POCKET ACCOUNT BOOK, Consisting of a Manila-Bound Book of 208 Pages and a Leather Case. By J. J. Taylor, M.D. Price, $1.00 Complete. Subsequent Books to Fill the Case 40 Cents Each, or 3 for $1.00. Philadelphia: Published by The Medical Council.

This is strictly a business account book without the obstetric tables, tables of poisons, etc., which are common in these publications. It is well arranged and convenient. The business suggestions in the first part of the work are the only printed matter and these are useful and suggestive. The book is arranged in a sort of single-entry ledger form, without dates, so that it is good for all time.

ATLAS AND EPITOME OF ABDOMINAL HERNIAS. By Privatdocent Dr. Georg Sultan of Göttingen. Edited, with Additions, by William B. Coley, M.D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons). With 119 Illustrations, 36 of Them in Colors, and 277 Pages of Text. Cloth. Price, $3.00 net. Philadelphia and London: W. B. Saunders & Co. 1902.

This little book belongs to the Saunders' series of atlases, and is a translation from the German. The text does not profess to be exhaustive, but it is clear and concise, and the common varieties of hernia are well described. The editor has added an occasional note to the text. One, condemning the injection method of treating hernia, and another condemning the use of buried non-absorbable suture materials in the radical operation, are to be commended. Since the mortality of the radical operation is only 0.5 per cent. (5,418 cases, 28 deaths), and the recurrences only about 4 per cent. (2,853 cases, 114 recurrences), there is little reason why the ordinary individual should be burdened with the wearing of a truss. The illustrations, many of them in colors, are works of art and are the chief value of the work. Post-operative ventral hernia has received no attention, and the method of operating on umbilical hernia by overlapping from above downward, as has been so satisfactorily practiced of late by some American operators, has not been mentioned.

ATLAS AND EPITOME OF TRAUMATIC FRACTURES AND DISLOCATIONS. By Professor Dr. H. Helferich, Professor of Surgery at the Royal University, Greifswald, Prussia. Edited, with Additions, by Joseph C. Bloodgood, M.D., Associate in Surgery, Johns Hopkins University, Baltimore. From the Fifth Revised and Enlarged German Edition. With 216 Colored Illustrations on 64 Lithographic Plates, 190 Text-Cuts, and 353 Pages of Text. Cloth. Price, $3.00 net. Philadelphia and London: W. B. Saunders & Co. 1902.

The chief point to be said in favor of this work are the colored plates and illustrations, as the text is little more than a setting for the plates. However, many excellent little points will be found scattered through the text, as, for instance, the condemnation, as a rule, of the primary permanent fixed dressing; the dangers and advantages of the ambulatory treatment, etc. The editor has added a number of notes, most of which are good, but at times he is too positive, as, for instance, the statement that "The functional result of a proper resection of these joints (shoulder and elbow) is always excellent," and in operative reduction of old dislocations of the shoulder, "Even in cases in which perfect reduction is possible, ... the function of the arm is never as good as after a resection." Again, under dislocations of the hip we find the statement, "In very old cases all hope of obtaining a movable joint must be abandoned, and a resection or a subtrochanteric osteotomy performed to correct the position of the limb." There are a number of cases on record where a very good movable joint has been obtained after operative reduction of old dislocated hips. While the work can not take the place of the more extensive treatises on fractures and dislocations, still the plates give to it a distinct value.

MANUAL OF GYNECOLOGY. By Henry T. Byford, M.D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago. Third Revised Edition. Containing 363 Illustrations, Many of Which Are Original. Cloth. Pp. 598. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

The subjects in this work are arranged in the order followed by the author in his lectures. The wording, paragraphing, marginal notes, etc., all indicate, as is stated in the preface, that the work is primarily intended for the student. The chapter on cystitis is very primitive, and such terms as "spurious cystitis" should be avoided by a teacher. Under lacerations of the perineum we find hardly any mention of laceration of the muscles forming the true pelvic floor, and no reference is made to any of the modern operations on these muscles. The subject of gonorrheal infection is clearly handled, but the statement that "gonorrhea always begins as an acute inflammation" in the female can not be sustained. The advice to transfuse salt solution in the collapse of ruptured extra-uterine pregnancy before the bleeding points have been secured is dangerous, because if the hemorrhage has temporarily ceased, the increased tension produced by the salt solution may cause its renewal. The treatment of many questions on pathology would not stand a critical review, but as the subjects are not entered into extensively, but are more to give the student a general idea, their treatment answers the purpose. As a student's reference book it will continue to hold a leading place.

DICTIONARY OF PHYSIOLOGY AND PSYCHOLOGY, Including Many of the Principal Conceptions of Ethics, Logic, Esthetics, Philosophy of Religion, Mental Pathology, Anthropology, Biology, Neurology, Physiology, Economics, Political and Social Philosophy, Philology, Physical Science and Education, and giving a Terminology in English, French, German and Italian. Written by Many Hands and Edited by James Mark Baldwin, Ph.D. (Princeton), Hon. D.Sc. (Oxon.), Hon. LL.D. (Glasgow), Stuart Professor in Princeton University. With the Coöperation and Assistance of an International Board of Consulting Editors. In Three Volumes, with Illustrations and Extensive Bibliographies. Vol. II. Cloth. Pp. 892. Price, $5.00. New York and London: Macmillan & Co., Ltd. 1902.

The second volume of Baldwin's great dictionary of philosophy and psychology is considerably more bulky than the first and maintains well the character and general excellence and fulness that were so noticeable in the earlier published portion. There are very few things which we looked for and failed to find; the omissions were the more notable for their rarity. We find, however, by close searching here and there, an oversight, such as is inevitable in any work of this kind; thus, among modern Italian philosophers we see no mention of Rosmini, for example, who has not received a biographical note. Such omissions, however, are very few and the book will be a most valuable work of reference and of study to the professional man who takes an interest in the more abstruse problems of his work. The various articles on mental diseases and other medical subjects in this volume are excellent. This book completes the text of the work, which, however, will not be complete for the student without the coming volume containing the bibliography. The work as a whole fills most satisfactorily a long-existing gap in our literature.

Societies.

Chatham County (Ga.) Medical Society.—This society was incorporated Dec. 12, 1902. The objects are the advancement of medical science, social culture and the promotion of a high standard of ethics among its members.

Marion County (Ohio) Medical Society.—At the regular annual meeting of this society, held January 6, at Marion, the following officers for the ensuing year were duly elected: President, Dr. Oliver W. Weeks (re-elected); vice-president, Dr. Robert Ramroth; secretary Dr. Herman S. Rhu; treasurer, Dr. Francis B. Sawyer, all of Marion; and board of censors, Drs. Lewis D. Hamilton, and Elmer O. Richardson, Marion, and Dr. John I. King, Martel.

New York Academy of Medicine.—The newly-elected officers of the academy are as follows: President, Dr. Andrew H. Smith; vice-president, Dr. M. Allen Starr; treasurer, Dr. Herman L. Collyer; trustee, Dr. Arthur M. Jacobus; member of committee on admissions, Dr. J. Milton Mabbott, and member of committee on library, Dr. Joseph Collins. The newly-elected officers of the Section on Pediatrics are Dr. Henry Heiman, president, and Dr. Linnæus E. La Fetra, secretary.

Columbus and Franklin County (Ohio) Medical Society.—At the meeting of the Columbus Academy of Medicine, Dec. 1, 1902, a new constitution and by-laws were adopted, which provide that the society shall embrace Franklin County and that in the future its relations with state and national medical societies shall be closer. At the annual meeting, Dec. 15, 1902, Dr. Francis W. Blake was elected president; Dr. Hugh Hendrixson, vice-president; Dr. John D. Dunham, secretary, and Dr. William C. Davis, treasurer, all of Columbus.

Canton (Ohio) Medical Society.—This society held its third annual banquet January 9, covers being laid for 100. Dr. Dan Milliken of Hamilton, Ohio, made the chief address. The officers elected for the ensuing year are: President, Dr. Allen B. Smith; vice-president, Dr. Frank E. Hart; corresponding secretary, Dr. D. F. Danker; recording secretary, Dr. Harry A. March; treasurer, Dr. Frank DaHinden; censors, Drs. James Fraunfelter, Odo E. Portmann, and Austin C. Brant. The society is in an exceedingly prosperous condition, and has been granted an alcove room in the Carnegie Library in process of construction.

Boulder County (Colo.) Medical Society.—This society held its annual meeting in Boulder, January 1. The retiring president, Dr. Emley B. Queal, Boulder, delivered the annual address on "Gastric Digestion," in which he reviewed the recent studies on the subject, as carried out by means of the *x*-rays and subnitrate of bismuth. The following officers were elected for the ensuing year: President, Dr. Emley B. Queal; vice-president, Dr. Oscar M. Gilbert; secretary, Dr. W. W. Reed, and treasurer, Dr. Martin E. Miles; censors, Drs. George H. Cattermole, Lafayette Z. Coman, and Oscar M. Gilbert, and delegate to the state society, Dr. George H. Cattermole, all of Boulder.

Academy of Medicine of Toledo and Lucas County, Ohio.—This society, January 9, completed its list of officers as follows: President, Dr. Julius H. Jacobson; vice-president, Dr. Samuel S. Thorn; secretary, Dr. Herbert E. Smead; financial secretary, Dr. Charles P. Wagar; treasurer, Dr. Willis W. Grube; board of censors, Drs. William H. Fisher, Oscar Hasencamp, William J. Gillette, John A. Wright, and Seth W. Beckwith; members library board, Drs. Samuel S. Thorn, Harrison Hathaway, William J. Gillette, Park L. Myers and A. L. Steinfeld, and committee on legislation and public health; Drs. William C. Chapman, Charles L. Van Pelt and William G. Dice, all of Toledo.

Association of College Gymnasium Directors.—This association held its sixth annual meeting in New York City, December 30 and 31. An interesting feature of the proceedings was the presentation by Dr. J. E. Raycroft, Chicago University, of a plaster model, one-quarter life size, representing the average American college athlete. This statuette was modeled from data obtained from the records of 400 athletes in the gymnasiums of Harvard, Yale, Cornell, Columbia and elsewhere. A significant fact was that this composite figure showed no abnormal display of muscle, but a good all-round development. Dr. W. A. Lambeth, of the University of Virginia, urged that the physical work done by college students should be credited to them just as the other work of the curriculum. Considerable time was given to the question of fatigue and overexertion in physical culture. Dr. R. T. McKenzie, McGill University, read a paper on the "Effects of Overexertion in Athletics and Gymnasium," and Dr. W. G. Anderson, Yale University, dwelt at great length on what had been accomplished toward determining when overexertion begins. The following officers were elected: President, Dr. Watson L. Savage, Columbia University; vice-presidents, Drs. Jay W. Seaver and W. A. Lambeth, Virginia; secretary-treasurer, Dr. James A. Babbitt, Haverford College. The next meeting will be held Dec. 31, 1903, at Princeton University.

SOUTHERN COLORADO MEDICAL ASSOCIATION.

Second Annual Meeting, held at Colorado Springs, Dec. 2 and 3, 1902.

The President, Dr. W. A. Campbell, Colorado Springs, in the Chair.

Among the papers read were the following: "Prostatectomy," by Dr. R. K. Hutchins of Colorado Springs.

DR. GEORGE F. LIBBY, Colorado Springs, read a report of a case of monocular blindness of fifty years' duration, with restoration of sight following hemiplegia. This case showed the influence of disease or injury of one part of the body on another organ or part of the body. Dr. Libby thought the blindness was psychic.

DR. GILLETT, Colorado Springs, read a paper on the "Medical Embryo from Conception to Inception," giving an outline of the embryo physician from start to finish.

A paper was read by Dr. Epler, Pueblo, on "Diseases of the Rectum." All these papers were freely discussed.

DR. M. BESHOAR, Trinidad, read a very interesting paper on the "Treatment of Typhoid Fever," giving his experiences of nearly fifty years' practice. This paper was thoroughly discussed and many new ideas were brought out.

DR. A. T. STODDARD, Pueblo, read a paper on "Diagnosis and Pathology of Pelvic Inflammations."

DR. DENNIS, Colorado Springs, read a paper on "Anesthetics and Anesthetizer."

A paper by Dr. J. W. Rambo, Florence, on "What Are We Prescribing for Our Patients?" showed how easy it is for physicians to get into a routine of prescribing and use the proprietary medicines and even nostrums.

The President's address was on "Colorado Climate and Eastern Patients." This paper was full of good ideas and bright things.

DR. W. A. SWAN, Colorado Springs, reported a case of rupture of the membranes two months before delivery; twins, males, breathing feebly for a few minutes, with a common membrane and two sacs. The mother made a slow recovery. In the discussion which followed many reported cases of rupture of membranes which were carried to full term or nearly so.

DR. H. W. HOAGLAND, Colorado Springs, reported a most interesting case of "General Secondary Carcinoma."

DR. SOLLY, Colorado Springs, delivered an address on the relation of rhinology to general medicine.

DR. A. C. MAGRUDER, Cripple Creek, showed a splint of his own devising for holding in apposition a fracture below the knee when putting on splint, wiring ununited bones, putting on plaster splint, or, in fact, in adjusting any apparatus or moving patient from place of injury to hospital or home without pain.

Membership Open to the Whole State.

A resolution was introduced by the President, changing the limit of membership to any part of the state, as follows:

WHEREAS, Our society bears the name of "The Southern Colorado Medical Association," which name leads many physicians of the state to believe that its membership is to be limited to those living south of the Great Divide, and

WHEREAS, There are a considerable number of physicians in the southern part of the state who believe our association is beneficial to them in many ways, and does not at all interfere with the meetings of the state society, but, on the contrary, is a benefit to the same in holding the profession together and providing an autumn meeting for them where they can meet, interchange experiences and mingle socially, and thereby throw off the responsibilities of practice in a degree.

Be It Resolved, That we accept membership from all sections of the state, and invite co-operation of the profession throughout the state in making the autumn meeting a success.

New Officers.

The list of officers for the ensuing year is as follows: President, Dr. Michael Beshoar, Trinidad; vice-presidents, Drs. Alexander C. Magruder, Cripple Creek, and Rutherford H. Paxton, Florence; treasurer, Dr. John A. Black, Pueblo, and secretary, Dr. Cyrus F. Taylor, Pueblo.

The society adjourned to meet at Cripple Creek Oct. 20, 1903.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held at St. Joseph, Mo., Dec. 29 and 30, 1902.

The President, Dr. James E. Moore, Minneapolis, in the Chair.

(Concluded from page 119.)

Lung Surgery—Historical and Experimental.

DR. B. MERRILL RICKETTS, Cincinnati, discussed this subject and illustrated his remarks with a series of stereopticon views.

The Pathology that Remains After the Non-Surgical Treatment of Peritonitis.

DR. H. D. NILES, Salt Lake City, stated that 95 per cent. of all survivors of non-surgical treatment of peritonitis are left with infection outside the peritoneal cavity and adhesions inside of it. The anatomic peculiarities of the gall bladder, appendix and Fallopian tubes favor the imprisonment of infection, and about one of these organs the surgeon usually finds pathologic conditions, unless it has been mechanically removed. The author's experience leads him to believe that about 40 per cent. of the possessors of infection and adhesions suffer from recurrent attacks of acute and subacute peritonitis, and less than 1 per cent. from mechanical obstruction of the bowels. He believes that the pathology that the remaining 59 per cent. carry within their abdomens is responsible for much distress and many deaths attributed to other causes or to no well-defined cause.

Surgical Treatment of Tubercular Peritonitis.

DR. D. S. FAIRCHILD, Clinton, Iowa, reached these conclusions:

1. If an intra-abdominal focus of tuberculosis is diagnosed or is suspected, an abdominal section should be made with the veiw of a more efficient treatment.
2. If a chronic tuberculosis of the peritoneum with ascites is diagnosed, or believed to exist, a laparotomy is indicated as soon as it is found that medical and hygienic treatment has failed.
3. In fibrous tuberculosis of the peritoneum, the same course should be pursued, and if cheesy degeneration has not commenced, or progressed too far, a certain percentage of recoveries will follow.
4. In acute tuberculous peritonitis, with ascites, and high temperature, laparotomy is useless.
5. In extensive adhesive tuberculosis, with matting of the intestines, laparotomy is useless, and the attempt to separate the adhesions is dangerous in its immediate results.

Injury to Nerves Following Fractures.

DR. A. L. WRIGHT, Carroll, Iowa, reported a fracture of the humerus through the middle third, with injury to the musculospiral nerve between the ends of the bone or by pressure by the callus.

Treatment of Nevi.

DR. JOHN P. LORD, Omaha, discussed the varieties of nevi, their etiology and pathology, and reported several interesting cases. He said the hot water treatment of cavernous angiomas, as suggested by Wyeth, is under trial, and will doubtless have a place in the treatment of selected cases. The treatment of port-wine marks by electrolysis is too tedious and painful for large areas. The results are not perfect, in that they are seldom complete, and leave some scarring. The *x*-ray promises better, and hot air would seem to have possibilities. Electrolysis occupies first place in hairy nevi, and will probably continue to do so unless the *x*-ray will produce permanent atrophy of the hair follicles. The operation of excision of very large tumors will probably never be supplanted by anything less radical; and hitherto inoperable tumors are rapidly yielding to the control of the operators of the new century.

Hypernephroma.

DR. M. L. HARRIS, Chicago, summarized his points thus:

1. The hypernephromata are tumors of adrenal tissue and therefore probably neither sarcomatous nor carcinomatous.
2. Such tumors may or may not form metastases. When they do, they are distinctly malignant.
3. When they are within the kidney capsule, or have perforated it by extension, the kidney should be removed.
4. When they originate in the adrenal proper, they are usually separated from the kidney tissue by a connective tissue capsule, and however much the kidney may be flattened, or fixed, to the tumor, a line of cleavage may usually be found which will allow of the kidney being separated from the tumor and saved to the patient.

In the discussion Drs. C. W. Oviatt, Oshkosh, Wis.; Van Buren Knott and A. C. Bernays, St. Louis, reported cases.

DR. J. E. SUMMERS, JR., Omaha, reported "Two Cases of Acute Intestinal Obstruction Following Contusion of the Abdominal Walls."

DR. HENRY T. BYFORD, Chicago, described "A New Method of Shortening the Round Ligaments Intraperitoneally for Retroversion of the Uterus," which will appear in full in THE JOURNAL.

Dermoid Cysts of the Intestinal Tract.

DR. WILLIAM JEPSON, Sioux City, Iowa, presented a paper on this subject and reported an interesting case. The points of interest which these cysts have for surgeons are: 1. That in a large per cent. of the cases the cysts, although innocent in themselves, ultimately lead to a fatal issue, either through

obstruction of the intestinal lumen, or because of their contents becoming infected from the intestinal canal, terminating in peritonitis. 2. If their removal is undertaken before such complications have resulted, a favorable termination can be looked for.

Appendicitis—Operation and Indications.

DR. A. C. BERNAYS, St. Louis, read a paper with this title. The author laid stress on the fact that we can know nothing definite about the pathologic process which would warrant delay in operating. He believes many lives are lost because the physician is lulled into hopeful security by an amelioration of symptoms which can not be depended on to last; it may change and the favorable time for operation be missed. In so-called intermediate cases a waiting policy is justified because the system is immunizing and fortifying itself against the toxins. An operation after the body has been immunized, which means that the pus has been made less virulent, is less dangerous. Dr. Bernays thinks that an operation is likely to be less dangerous on the seventh or eighth day than on the third or fourth, but pleads strenuously for operation on the first or second day of the attack, and claims that 98 per cent. of all cases operated on at that early period will be saved.

Hyperplasia of the Uterus.

DR. C. G. GEIGER, St. Joseph, Mo., discussed the causes and varieties. The treatment of the various conditions is so dependent on their causation that each case demands a separate investigation. The ideal way of approaching this subject lies in the direction of prevention, which, in a great many cases, the attending physician is able to do. But gynecologists must meet the disease already developed and devise methods which, if not curative, are palliative. Iodin and caustics in the hands of the essayist have not been of much service. He believes that caustics do more harm than good. In neurotic patients nothing is better than a change of climate and scenery. In some cases a change in the surroundings accomplishes much good. To sum up the treatment briefly, the patient should be given rest, the cause removed, the diseased organ depleted and, if possible, the patient's general health improved.

DR. J. N. WARREN, Sioux City, Iowa, contributed a paper entitled "Some Questions in Abdominal Surgery."

AMERICAN ROENTGEN RAY SOCIETY.

Third Annual Meeting, held in Chicago, Dec. 10 and 11, 1902.

The President, Dr. G. P. Girdwood, Montreal, Can., in the Chair.

(Concluded from p. 120.)

Radiotherapy in Pulmonary Tuberculosis.

DR. GORDON C. BURDICK, Chicago, contributed this paper. Much of his work was based on a series of experiments conducted on guinea-pigs inoculated with the tubercle bacillus. He found that when a culture of the bacillus is exposed to the Roentgen ray its development is checked considerably, although it in every case failed to kill the germ. Pigs exposed to the ray lived much longer than pigs not so exposed. When the ray was used in cases of tuberculosis in man a slow but certain improvement took place and eventually a good recovery. Cases of fibroid tuberculosis yielded very slowly. Abdominal tuberculosis requires longer treatment than the pulmonary form. In a few cases a tendency to relapse has been noted. In the cases of mixed infection improvement is delayed and there is a very marked tendency to the sudden development of toxemia. Joint tuberculosis, in which only the bones are involved, offers the best results, but permanent relief can not be obtained until complete ankylosis has occurred, and the author advises that nothing should be done with the *x*-ray until this ankylosis has occurred. He used the ray in a total of 43 cases of tuberculosis in all parts of the body with uniformly good results, except in one case, in which death occurred. This was a case of advanced general tuberculosis, and even here the improvement was at first marked.

He does not believe that this is the method of treatment of tuberculosis that the profession has been looking forward to, but that it is only an extremely useful adjuvant in the treatment. For the purpose of gaining a certain end unquestionably good results have been attained with this treatment, but not an absolute cure.

DISCUSSION.

DR. J. RUDIS-JICINSKY, Cedar Rapids, reported 4 complete cures out of 20 cases. In joint tuberculosis he cautioned against idiosynerasy. In glandular tuberculosis he said the results were bad, as recurrence followed in each case.

DR. RUSSELL H. BOGGS, Pittsburg, reported decided improvement in 6 cases of pulmonary tuberculosis and an apparent cure after a year in one case.

DR. GIBSON, Birmingham, Ala., also reported good results.

DR. PHILLIPS, Cincinnati, found that he got better results in treating joint tuberculosis when he used a static cataphoresis instrument, using such remedies as formaldehyd and creosote.

X-Ray Treatment in Intra-Abdominal and Other Deeply-Located Malignant Growths.

DR. CLARENCE E. SKINNER, New Haven, Conn., said that the effect of electricity on cancer is due to the specific influence of the *x*-light on the tissues. He reported 38 cases of malignant growths treated with the *x*-ray with a mortality of 34 per cent. In 3 cases there was a complete disappearance of the tumor; continuous reduction in size of the tumor in 15; temporary reduction in size with subsequent increase ultimately, resulting fatally in one; complete apparent arrest in 4; no effect demonstrable on size of growth in 15; complete permanent relief of pain in 16; complete temporary relief in 3; partial in 8; no relief in 4, and none at all in 10. General condition improved in 14; temporarily in 8; apparently not influenced in 9; in 7 the general condition was not noticeably impaired when the patient came for treatment. Gain in weight in 6; no influence apparent in 32. Hemorrhage lessened in 9; not influenced in 2, and no hemorrhage observed in 27. Toxemia of varying degree in 15 cases. Out of 38 cases there were three apparent cures; 17 continuously benefited and are still improving, with prospects of an ultimate cure; 13 temporarily benefited; 2 not benefited, and in 3 treatment was discontinued by the patients regardless of any benefit.

Every one of these cases was inoperable because of advanced disease and offered a hopeless prognosis by any other method of treatment. Three applications of the ray were made weekly, five minutes at a time, taking into consideration the patient, apparatus and the result obtained from the treatment. The *x*-ray should be used only by skilled operators, as they alone are able to appreciate all the conditions which may arise in the course of the treatment. The application of the rays in different parts is fully discussed and also the methods and attention called to possible dangers.

The author arrives at the following conclusions:

1. The pain of deeply-seated cancers is affected by the *x*-light from slight amelioration to entire disappearance.
2. In many cases the *x*-light is capable of exercising an influence on deeply-seated cancers of sufficient intensity to retard the disease and prolong life considerably.
3. In a certain proportion of cases it possesses sufficient power to entirely overcome deeply-seated malignant processes.
4. A small number of deeply-seated malignant processes exhibited absolutely no indication of being susceptible to the *x*-light.
5. Phenomena indicating toxemia not infrequently accompany the treatment of malignant disease by the *x*-ray. This is due to the elaboration or development of toxins dependent on a retrograde metamorphosis of the tissues insusceptible of regeneration. The effect of the *x*-ray light is due to a stimulation of the reparative functions of the tissues dependent on an inflammatory reaction. Its destructive influence is always exhibited on tissues which are low in vitality.

DISCUSSION.

DR. J. P. MARSH, Troy, N. Y., reported a case of uterine carcinoma referred to him for a hysterectomy, on which he used the rays to a favorable termination.

DR. J. RAWSON PENNINGTON, Chicago, described his shield for application of the rays to growths in the rectum. He favors the high tube for this work on deep-seated growths.

DR. J. N. SCOTT, Kansas City, Mo., believes that all patients operated on for malignant growths should be exposed to the *x*-ray as soon after the operation as possible. It hastens the process of healing in addition to giving the patient the benefit of the ray. It will also stop any tendency to hemorrhage.

Diagnosis of Calculi by X-Rays.

DR. RUSSELL H. BOGGS, Pittsburg, Pa., concludes that the *x*-ray is the only means by which calculi can be diagnosed absolutely, especially as calculous conditions are often very obcure, pointing to other conditions. Even minute particles of uric acid can be radiographed. Many gallstones can not be radiographed because of the position of the gall bladder, change in its position and the composition of the stone. For radiographing gallstones a large amperage should be used for a short time only, however. The apparatus must be a suitable one and the preparation of the patient is as essential as in a surgical operation and is the same. The time of exposure need not exceed from two to eight minutes, depending on the size of the patient. The author reported a number of cases and exhibited skiagrams of cases of renal calculi.

DISCUSSION.

DR. J. RUDIS-JICINSKY, Cedar Rapids, Iowa, advised that in skiagraphing for renal calculi a plate large enough to cover not only the kidney, but also the ureters, should be used. The stone may be located in the ureter. The plates should be examined beforehand to ensure their freedom from spots and imperfections. Skiagrams should be made from front and side so that an accidental air bubble in the plate will not be mistaken for a stone.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Ringworm.

The *Indian Med. Record* advises the following procedures in treating ringworm of the scalp: The hair should be clipped closely surrounding the ringworm and all the diseased hairs should be depilated. The parts should then be thoroughly washed with carbolic soap and warm water, followed by an application of the following ointment:

℞. Acidi carbol.
Ung. citrine
Ung. sulphuris, āā 3iss 6

M. Sig.: Apply locally.

This is said to cause no pain. The sulphur in the foregoing prescription should be doubled in cases of children under ten years of age.

Uses of Sulphur.

W. O. Bunnel, in *Med. Council*, recommends sulphur in sexual impotency and for hemorrhoids; in ulceration involving the anal region sulphur ointment dram one (4.00)) to the ounce of adeps (30.00) should be used, applied internally and externally. He also recommends it in incontinence of the urine and chronic catarrh of the bladder. It is useful in anemia, accompanied by amenorrhea, in chronic rheumatism and in scrofulous conditions of the glands or joints. It is of value in the treatment of all skin diseases of parasitic origin such as scabies, etc., applied as follows:

℞. Sulphuris .....ʒi 30
Potassii carb. 3ii 8
Adipis .....ʒv 150

M. Sig.: Anoint the parts two or three times a day after having cleansed them with soap and water.

He recommends sulphur locally in diphtheria, blown or dusted on the membrane. It is of service in the treatment of skin diseases, given in the form of a sulphur bath by allowing the fumes to envelop the body by sprinkling the sulphur on a hot iron after first placing the patient on a cane bottom chair, enveloping him with an awning.

As a hair tonic it is recommended in the following combination:

℞. Lactis sulphuris 3i 4
Olei bergamot .....gtt. x 65
Triturate and add:
Glycerini 3ii 8
Triturate well again and add:
Aquæ rosæ .....ʒx 300

M. Sig.: Apply with a soft sponge once a day. This is said to produce a growth of hair if the follicles are not dead. It is also recommended in all slow healing ulcers, accompanied by an offensive discharge.

Chilblains.

In the treatment of chilblains which have not ulcerated, the *Rev. Méd de Normandie* recommends to those parts where the skin is simply red and tense that compresses saturated in decoction of walnut leaves be applied. The decoction may be made up as follows:

℞. Walnut leaves 3iiss-3iiiss 10-14
Aquæ (boiling) .....Oii 1000

M. Fiat decoctio. Sig.: Apply on compresses to the affected parts.

The compresses should then be covered with oiled silk. Following these moist compresses the following may be applied locally:

℞. Acidi borici .....gr. xv 1
Acidi tannici .....gr. ivss 30
Petrolati 3iiss 10

M. Sig.: Apply locally thoroughly to the affected parts; or the following may be applied as a powder:

℞. Amyli 3iiss 10
Lycopodii 3iiss 10
Acidi tannici .....gr. v 30

M. Fiat pulvis. Sig.: Apply locally. If the hands are involved gloves may be worn to retain the powder.

The following outline of treatment taken from an abstract in *N. Y. Med. Jour.*, is recommended: Bathe the hands night and morning in a decoction of walnut or eucalyptus leaves, or in dilute plumbi subacetas. Then rub them with camphorated alcohol, eau de cologne or aromatic vinegar and dust with the following powder:

℞. Bismuthi salicylatis 3iiss 10
Amyli .....ʒiii 90

M. Sig.: Apply locally; or:

℞. Acidi tannici .....gr. xxx 2
Glycerini
Alcoholis camphoratæ, āā.....ʒiss 45

M. Fiat linimentum. Sig.: Apply locally; or:

℞. Acidi carbol. .....gr. viiss 50
Menthol 3ss 2
Petrolati 3v 20
Lanolini 3iiss 10

M. Fiat unguentum. Sig.: Apply locally; or:

℞. Salol
Xeroform, āā 3iiss 10

M. Sig.: Apply locally.

The following is recommended to be taken internally:

℞. Quininæ sulph. .....gr. xv 1
Ext. ergotæ aqueous .....gr. viiss 50
Pulv. digitalis .....gr. iss 09
Pulv. belladonnæ rad. .....gr. 3/4 45

M. Ft. pilulæ No. xl. Sig.: One pill three times a day for three or four days.

Worms.

M. B. Pollard, in *Med. World*, recommends the following in the treatment of worms:

℞. Olei chenopodii anthel. 3i 4
Ext. spigeliæ flu. et sennæ .....ʒss 15
Santonin .....gr. viii 50
Pulv. acaciæ 3i 4
Syr. rhei arom. q. s. ad.....ʒi 30

M. Sig.: Shake and take one teaspoonful three times a day one hour before meals, to be followed three hours after taking the last dose by one tablespoonful of castor oil and ten drops of turpentine.

Urticaria.

The *Indian Med. Record* recommends the following outline of treatment of urticaria: If there is reason to suppose that the stomach contains indigestible matter, a mild dose of vinum ipecacuanhæ and castor oil followed by alkalies, and a simple diet for a few days. In the chronic form the diet must be

carefully regulated and all stimulants must be avoided. The chief remedies should consist of laxatives, antacids, vegetable tonics, and warm or tepid baths. In the acute form, olive oil should be applied to the affected parts or the following combination may better answer the purpose:

R.	Zinci oxidi	℥i	4
	Glycerini	℥ss	15
	Aquæ calcis	℥vi	180

M. Sig.: Apply locally to relieve the itching and irritation.

Avoid meat and eat ripe fruit and vegetables, drink milk and alkaline waters.

Salt Pack in Rheumatic Gout.

According to the *Polyclinic* the treatment employed successfully by Hutchinson, in getting rid of the synovial effusion which may accompany rheumatic gout consists in soaking flannels in a saturated solution of sodium chlorid and applying them to the affected joints and covering them with oiled silk and bandages. This method should be repeated every night until the joint becomes normal again.

Herpes Zoster.

The following combination has been recommended in the treatment of herpes zoster:

R.	Morphinæ sulph.	gr. iv	25
	Collodii (flexible)	℥i	30

M. Sig.: Paint over the affected areas.

The foregoing, it is said relieves the burning and pain and aids in rapid return to the normal of the tissues thus protected.

Poulticing Gonorrheal Arthritis.

According to the *Med. Press and Circular* poulticing is a much more successful method of dealing with gonorrheal arthritis than is the application of ointments, ice or salicylic acid. In order to obtain the best results the poultices must be applied as hot as possible and require changing frequently day and night. Experience has shown that surgery is seldom needed in order to open and drain the joint if the foregoing simple method is properly carried out.

Dysentery.

J. B. Brandon, in an abstract in *Tropical Medicine*, recommends the following mixture in the treatment of dysentery when there are frequent movements of the bowels accompanied by pain and the presence of blood and mucus.

R.	Acidi sulph. dil. arom.	℥ss	15
	Tinct. opii	℥ss	15
	Sol. magnes. sulph. arom. q. s. ad	℥iii	90

M. Sig.: Take a teaspoonful every three hours in water until the blood and mucus have disappeared from the stools.

He recommends also turpentine stupes to the abdomen and a light diet, consisting of rice, soups, and broths given in small quantities, and repeated frequently.

After the blood has disappeared, pepsin and bismuth may be prescribed in small doses.

In cases of frequent evacuations accompanied by tenderness over the abdomen and a rise in temperature the following may be given:

R.	Hydrarg. chloridi mitis	gr. ii	12
	Sodii bicarb.	gr. ii	12
	Salol	gr. xxiv	1 60
	Bismuthi subnit.	gr. xxxii	2 12

M. Ft. chartula No. i. Sig.: One such powder every three hours until the tongue cleans. This may be alternated with bismuth subnitrate in two dram doses in the form of a mixture, given every three hours.

[In the foregoing prescription, containing salol, we trust the author has been misquoted as to the dose of that preparation. One should never give a single dose of salol containing twenty-four grains, to say nothing of repeating it once in three hours for perhaps several doses.]

Sulphur in Typhoid Fever.

Vorochiesky, in *Amer. Med.*, has employed sulphur in typhoid fever with the idea of ameliorating the ulcerative processes. He administered sulphur in doses of grains 20 (1.30) every two hours, and to children in doses of grains 5 to 8 (.30-.50) every two hours. According to his observations at the end of three days the symptoms were improved; the temperature had dropped, the tongue was more moist, the diarrhea had disappeared and the sleep and appetite improved. An enema given occasionally will overcome the constipation brought on by the use of the sulphur. He is of the opinion that it forms a protective coating, and thus reduces the danger of irritation to the ulcerated and inflamed mucous membranes. It is also a vasomotor constrictor, thus reducing the hyperemia and is a splendid intestinal antiseptic.

Medicolegal.

Liability for Smallpox Started from Pesthouse.—A pesthouse having been located 300 yards from the boundary line of the city, and 250 yards from the house of Mrs. Clayton, whose child contracted smallpox from the pesthouse, the Court of Appeals of Kentucky held, in the City of Henderson vs. Clayton, reported on page 582 of THE JOURNAL of Sept. 1, 1900, that Mrs. Clayton, who took the smallpox from her child, might recover damages therefor on the ground that the purpose of the statute in forbidding the pesthouse being put within one mile of the city boundary was to prevent the communication of contagious diseases to other persons from the pesthouse, and that it was the natural result that the mother should take the disease from the children living in the family with her. This is brought out by the court in the case of the City of Henderson vs. O'Haloran, just decided, in which it says that it is just as natural, and to be as reasonably expected, that other persons who were members of the family, whether temporarily or permanently, would take the disease. In this latter case, Nannie O'Haloran was a guest at Mrs. Clayton's house, and contracted the disease while there. She went there at Mrs. Clayton's invitation, and spent the night, sleeping in the same bed with the child, Mrs. Clayton answering her inquiry as to what ailed the child, who was broken out with some eruption, that she supposed it was chicken-pox. A judgment for $500 damages against the city is affirmed by the court. It says that if she had been cooking for Mrs. Clayton, whether by the day, week or month, and while cooking there had contracted the disease, which had been brought there from the pesthouse, plainly such a result would be no more remote than Mrs. Clayton's contracting the disease; and no sound distinction could be made between a person who lived in the house for 24 hours and one living there longer, if they both took the smallpox while there. The guest was a member of the family as much as the servant would be. And while it was not to be anticipated, perhaps, that a particular person would visit at this house at this time, or would be engaged there as a domestic, or be there for any other reason, still it was to be anticipated that persons would come there for various purposes, and the communication of the disease from the persons living in the house to these persons was a result as naturally to be expected as its communication from one member of the family to another. The purpose of the statute is to require the persons having the contagion of these diseases separated from the rest of the community, so as to prevent the spread of the disease. It was a result naturally to be expected when the statute was violated that the disease would be communicated to the persons living in the neighborhood, and that not only regular members of the family would take it, but also those who might, for any reason, for the time, be living with them. The court therefore concludes that the damages to this guest were not too remote to be recovered for.

Injury to One Already Diseased—Defective Sidewalk—Damages.—In Jordan vs. City of Seattle (Wash.), an action brought to recover for personal injuries alleged to have been sustained by reason of a defective sidewalk, the jury were instructed that if they believed from the evidence that the party suing was injured through the negligence of the city, and that, at the time of the injury, she was suffering from a varicose condition of the veins in the lower part of the left leg, and that such injury aggravated, augmented and accelerated such varicose condition, and the suffering occasioned thereby, then

their verdict would be for the party suing, unless they found that these conditions not only might have arisen, but must have arisen, if the negligence of the city (if they found it negligent in the premises) had not intervened. If the original act of the city was wrongful, and would naturally, according to the ordinary course of events, prove injurious to some other person or persons, and did actually result in injury, through the intervention of other causes which were not wrongful, the rule was that the injury should be referred to the wrongful cause—pass by those which were innocent. If one is reasonably responsible for the act, he is chargeable for direct result of the act, however surprising. The rule is, if by reason of delicate condition of health the consequences of a negligent injury are more serious still, for those consequences the defendant is liable, although they are aggravated by imperfect bodily conditions. The duty of caring and of abstaining from the unlawful injury of another applies to the sick, the weak, the infirm as fully as to the strong and healthy; and when the duty is violated the measure of damages is for the injury done, even though the injury might not have resulted but for the peculiar physical condition of the person injured, or may have been augmented thereby. The proximate cause of an injury is the efficient cause; the one that necessarily sets the other cause in motion. The public streets and sidewalks in a city are not constructed and maintained for the sole use of the healthy and robust people, but for the use of the infirm, the sick and decrepit as well. They may lawfully be traveled by every citizen, without regard for age, sex or physical condition. If the city negligently permits such streets and sidewalks to remain out of repair, and any person, who is free from negligence, is injured, the city is liable for the injury. The city is chargeable with the knowledge that people of different bodily conditions travel its streets, and that among those are the weak, the decrepit and those with organic predisposition to disease. It is reasonable to expect that in certain cases, if an injury happens to one of the latter class, full recovery therefrom may be retarded or prevented by such predisposition or tendency to disease, and the city is chargeable with knowledge that such tendency to disease might greatly aggravate a bodily injury, etc. The Supreme Court of Washington thinks no error was committed by the instructions given, which it thinks are sustained by the great weight of, if not by universal, authority. Furthermore, it refuses to hold a verdict for $6,090 excessive, as it says sufficient testimony went to the jury that the ulcerations formed by reason of the accident were permanent, and that the party suing was partially disabled, and probably would be for life, in addition to which an exhibition of the affected parts was made to the jury, so that they had a better opportunity to determine the malignity and baleful effect of the injury than this court.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Philadelphia Medical Journal.

January 3.

1 *Gastroptosis: A Critical and Clinical Study with Reference to 100 Cases. Albert P. Francine.
2 A Report of a Case of Chronic Splenic Anemia. James E. Talley.
3 *The Perineum. James D. Love.
4 A Local Electric Light Bath. C. C. F. Nieschang.
5 A New Reducing Cyrtometer. Robert P. Elmer.
6 A Case of Traumatic Rupture of the Bladder—Recovery. Edward A. Schumann.

1. **Gastroptosis.**—Francine's lengthy article discusses all divisions of the subject. It refers to a similar article by Drs. Steele and Francine in THE JOURNAL, Nov. 8, 1902, p. 1173, which was based on 70 cases. The present article discusses 100 cases. The etiology, symptoms and diagnosis are discussed at length, and he finds the etiology difficult to explain. He objects to gastric inflation by carbonic acid and to Einhorn's gastrodiaphane and Turck's gyromele. Inflation of air according to Runeberg's suggestion is the method recommended. The indications for treatment are to relieve the stagnation and fermentation and increase the motor power and peristaltic activity of the organ, to furnish support to the stomach and other abdominal viscera, relieving local congestion, to tone up the general health and mental attitude. He gives formulas to combat fermentation in the stomach, and mentions abdominal supports and operation, which last he hesitates to recommend except in extreme cases.

3. **The Perineum.**—Love comments on the evils following perineal injuries and thinks they are usually inadequately treated. Many cases of perineal laceration may be due to faulty position of the mother during childbirth. It is his custom to deliver all primiparæ, at least, in the left lateral prone position, which makes the obstetrician master of the situation. Immediate repair, when possible, is insisted on, but he does not think it necessary to enforce the dorsal position or bind the knees together. He objects to the vaginal douche after operation, both on account of the possible risk to the sutured parts and for the danger of intection.

Medical News, New York.

January 3.

7 *Disappearance of Yellow Fever from Havana, Cuba. W. C. Gorgas.
8 *Tabes Dorsalis: A Study of 140 Cases of Locomotor Ataxia. Joseph Collins.
9 A Case of Supernumerary Breast in the Axilla of an Adult Male. Frederick Griffith.
10 The Diuretic Action of Rectal Irrigation—The Specific Action of Normal Saline Solution in the Production of Diuresis. Robert Coleman Kemp.
11 *Hematocele. W. C. Bowen.
12 *Why Chloroform Should Be Used in Puerperal Eclampsia. Douglas H. Stewart.

7. **Yellow Fever in Cuba.**—Gorgas gives the history of the Havana work, calling attention to the peculiar habitat of yellow fever, the conditions which will stop its spread, and prophylaxis by quarantine. He remarks that Havana since the American occupation has averaged over 17,000 non-immune immigrants every year, a constant source for renewing the disease. In this respect it differs from other localities excepting perhaps Rio Janeiro. He describes the methods used, as narrated in THE JOURNAL, Nov. 15, 1902, page 1274. As a result, while in 1900, the year previous to the beginning of mosquito work, there were 344 deaths in Havana from malarial fever, in 1901 there were 151 deaths, and for the first nine months of 1902 there were only 68 deaths, which would give an average of 90 for the whole year if the ratio were continued, showing that the anopheles, which was especially a suburban mosquito, was pretty thoroughly decimated. He thinks that if the same measures were adopted in Rio Janeiro yellow fever would gradually become a disease of the past.

8. **Tabes Dorsalis.**—This first paper of Collins reviews the history of the disease and its etiology, with special reference to syphilis. He points out the large percentage of cases in which a positive knowledge of syphilis can be ascertained and the difficulties of making the statistics absolutely complete. He says that all we know of the etiology of tabes may be said in a line; it occurs in civilized, mature men and women who have had syphilis and in children who have inherited syphilis. It is a marvel, considering the prevalence of syphilis, how a few are chosen for tabes and the rest spared. The bacteriologist must discover the cause of syphilis, or if it has been discovered, corroborate it, and in co-operating with the physiologic chemist, discover the immediate cause of locomotor ataxia and of general paresis.

11. **Hematocele.**—Bowen describes diagnosis, effects and treatment.

12. **Chloroform.**—Stewart remarks that sugar is an antiseptic, that glycosuria counteracts the tendency to eclampsia by delaying the alkaline decomposition, that chloroform is a producer of temporary glycosuria and brings about a condition which is antagonistic to puerperal eclampsia. Therefore, chloroform is the anesthetic of preference in puerperal convulsions. It will limit the production of the chief poison causing the disease.

New York Medical Journal.

January 3.

13 *Dr. Adolf Lorenz at the Hospital for Ruptured and Crippled, Monday Afternoon, December 15. V. P. Gibney.
14 *The "Lorenz Hip Redresseur" and "Lorenz Spica." Charles H. Jaeger.

15 A Case of Ovarian Fibroma. H. A. Royster.
16 *The Present Status of Treatment of Hypertrophy of the Prostate. N. P. Dandridge.
17 *The Diagnostic Value of Abdominal Rigidity. Joseph A. Blake.
18 *Morphin Habituation and Its Treatment by Hyoscin Hydrobromid. S. Ormond Goldan.
19 *Bronchial Phthisis. Albert Abrams.
20 *The Successful Treatment of Pulmonary Tuberculosis—Mechanical and Medicinal. David Wark.
21 The Physician and the Pharmacopeia. M. I. Wilbert.

13. **Hip-Joint Dislocation.**—Gibney gives his impression of the Lorenz operation. He was not prepared to see him break down the adductors so quickly and bring the limb into complete abduction. This was accomplished by pulling with one hand and deep pressure on the muscle by the thumb and finger followed by blows with the ulnar border of his hand. The next move was to make extreme flexion of the thigh, the leg being extended; adduction, rotation and pulling until the head of the bone was on a level with the rudimentary acetabulum. A wedge-shaped piece of wood, covered at the top with kid, seemed to be the most important element in the reduction, giving a fulcrum behind the trochanter major, which enabled him to bring the head from its old position forward until it rested under the femoral vessels and could be distinctly felt. Lorenz goes farther than this and forces the abducted thigh back of the plane of the pelvis until he has stretched the capsule so that the slipping back and forth is easily accomplished. The amount of stretching and tolerance of the tissues was remarkably shown, and demonstration of the stability of the bone after reduction was admirable. In placing the thigh in complete outward rotation and abduction a plaster-of-paris application was made extending from the internal condyles to the free ribs, cut out above the genitals and below the stomach, but very thick across the lower part of the abdomen. Lorenz places most stress in the after-treatment on the function of bearing weight. The child is taught to walk, and in this way the head of the femur, more or less imperfectly formed and misshapen, induces a certain amount of irritation and encapsulation. The demonstration was so clear that the following morning Drs. Whitman, Warren and Gibney were enabled to replace eight dislocated hips within an hour and a half. The subsequent treatment is comparatively simple. The different positions must be maintained for months, and Lorenz makes this a strong point.

14. **Lorenz Hip Redresseur.**—Jaeger describes and illustrates this instrument, and states its advantages; also the advantages of the "Lorenz spica," among them its inexpensiveness and absence of inconvenience to the patient.

16.—See abstract in THE JOURNAL, xxxix, p. 1338.

17. **Abdominal Rigidity.**—The diagnostic significance of abdominal rigidity in cases of peritoneal involvement from various causes are emphasized by Blake, who summarizes as follows:

Abdominal rigidity is a constant symptom in all irritations and inflammations of the peritoneum, and is, therefore, a valuable sign in the diagnosis of the presence of foreign materials in the peritoneal cavity, even before inflammation has ensued. It is a fairly accurate index to the severity and extent of a peritoneal implication, and is, therefore, valuable in observing the course and estimating the severity of a peritonitis. It is a more reliable sign than pain or tenderness in the diagnosis of perforation occurring in typhoid fever. On the other hand, we must remember that the determination of rigidity in the upper part of the abdomen is not always easy, and that it may be present in inflammations of the pleura, the peritoneum being normal.

18. **The Morphin Habit.**—The hyoscin treatment originated by Lott has proved perfectly satisfactory in Goldan's hands. It consists in frequent hypodermic injections of hyoscin hydrobromid, beginning with 1/400 to 1/200 of a grain to determine the idiosyncrasy, and then slowly increasing and repeating it often enough to keep the patient under its influence for two days or more; later the length of time between the doses may be lengthened from one to two or three hours. A nurse must be in constant attendance and attention given to the respiration, heart, and mouth, which becomes dry. The room must be darkened and food given by enemata. The patient should be protected from changes in temperature, as he is liable to perspire profusely. Active delirium is apt to occur, and friends should be kept from the room as far as possible. All his cases have been successful; two are reported in detail.

19. **Bronchial Phthisis.**—Abrams describes this condition as closely resembling pulmonary phthisis when the bronchi are perforated, but the progress is slower. Pulmonary phthisis may coexist. Dulness over the manubrium sterni may extend to the right and left sternal line and often along the course of the bronchi. It is wise, he says, to accentuate dulness by percussion at the end of forced expiration. It is also important to have an assistant press forcibly on the lower end of the sternum. The posterior dulness will correspond to the fourth, fifth and sixth dorsal vertebræ and some distance on either side. Auscultation signs are nearly always present. If the main bronchus is obstructed, the vesicular murmur on the affected side is diminished or abolished, and the same is true as regards vocal fremitus and respiratory excursions. More often whistling sounds are heard during inspiration and expiration. A subjective feeling of weight in the upper chest region and spasmodic cough are observed in all these cases. Swelling of the cervical veins, edema and cyanosis of the face or arms, etc., may be present. The Roentgen ray signs are characteristic, showing enlarged bronchial glands and the lung negative. The diagnosis is not difficult, though syphilis may give some trouble. The course of the disease is long unless pulmonary phthisis coexists. In only one of his cases was a positive cure effected. Four patients are under observation who have had symptoms of cough and expectoration for more than ten years without any material involvement of their physical well being. Most dated their disease to some acute infection, notably measles and pertussis. The treatment is much the same as that of pulmonary tuberculosis. Residence at the seaside should be tried. Syrup of iodid of iron seems to have some effect. Potassium iodid was employed in the only case in which a cure was effected; the patient gave a history of syphilis. He has lately been employing inunctions of sapo viridis, one dram, rubbed in daily in different portions of the body, usually with good results. He has picked this point up somewhere in the literature, but can not give the reference.

20. **Pulmonary Tuberculosis.**—Wark insists on the general measures of treatment, improvement in respiration and circulation by proper exercise, change of climate, improvement of nutrition, especially when there is defective assimilation of fats. He mentions two drugs which he thinks will restore the ability to develop the fatty materials from the carbohydrates and other food elements. These are *Verbascum thapsus* and *Sticta pulmonaria*. Of the former he can not speak too highly as a weight increaser in this disease.

Medical Record, New York.

January 3.

22 *How to Study Anatomy. Stephen Smith.
23 *Headache in Its Relation to Disorders of the General Health. William M. Leszynsky.
24 Why the Open-air Treatment of Consumption Succeeds. M. A. Veeder.
25 *Cold and Disease. H. Randolph Tuthill.
26 The Close Analogy of Trachoma to Adenoids. Ralph Opdyke.

22. **How to Study Anatomy.**—Smith lays down a plan of teaching anatomy according to the developmental method, studying the several systems and tissues theoretically and systematically, instead of learning the subject by rote as at present.

23. **Headache.**—The various forms of headache are noticed by Leszynsky as the result of a clinical study of over 5,000 cases during the last twenty years. In a large majority headache is due to toxemia either from constipation or intestinal or gastric indigestion. In these cases it is usually frontal, but may be general. Gastric indigestion may produce it reflexly through the pneumogastric nerve, and headache due to both gastric and intestinal causes is frequently an accompaniment of stomach dilatation. Headache due to renal disease may be either uremic or congestive. The importance of urinary examination for uremic headache is specially remarked on. There are two kinds of rheumatic headache, one due to subоxidation and autotoxemia, and the other a muscular rheumatism or myositis of the scalp. The latter may be induced by exposure to cold like other forms of muscular rheumatism. Gouty patients are specially subject to headache as

are also diabetics, and in them it is often accompanied by hebetude and depression of spirits. Headache is a common symptom of nearly all the infectious diseases and fever; is often due to the toxic action of alcohol, coffee, lead, etc., and it is an important symptom of neurasthenia, though not always present. Its importance in epilepsy is at times very great, especially in diagnosis of obscure cases. He considers a constant general headache with optic neuritis and frequent attacks of vomiting, invariable signs of intracranial disease. [This is a rather general statement which should be considered open to exceptions.] Syphilitic headache is a matter of importance. He insists on the necessity of careful examination of the entire organism in every case to clear up the cause. The treatment is briefly noticed.

25. **Cold and Disease.**—The action of cold and draughts in producing disease is explained by Tuthill as due to the arrest of secretion from the mucous glands, allowing the pathogenic bacteria present at the time to become active. Ordinarily they are restrained by the normal secretions. This is the philosophy of taking cold, according to his views.

Boston Medical and Surgical Journal.

January 1.

27 *Notes on Multiple Primary Tumors. Paul G. Woolley.
28 *Percentage Modification of Milk in Infant Feeding. Maynard Ladd.
29 Foot-and-Mouth Disease. Langdon Frothingham.
30 *Chlorid of Ethyl as a General Anesthetic. Charles G. Cumston.

27. **Primary Multiple Tumors.**—Woolley argues for the existence of a systematic neoplastic tendency, which may produce multiple primary malignant tumors otherwise than by metastases. He begs observers to watch for cases of multiple primary growths and record them, with careful statistics of the general conditions, as well as the special ones surrounding the patient.

28. **Infant Feeding.**—Ladd gives formulas and tables and explains them in detail.

30. **Chlorid of Ethyl.**—Cumston gives the history of chlorid of ethyl narcosis and its methods of administration, and claims for it that it is safe so that an experienced anesthetist is not required. It can be given by any careful physician, thus having special advantages for operations of short duration. When used as a preliminary to ether, it avoids the period of excitement and on account of its pleasant odor and non-stifling effect, the most nervous patient can take it. The amount of ether afterward used may also be much reduced. Transition from one anesthetic to another is quite insensible. Thus far no contraindications have been pointed out, though they may yet be discovered. He finds kelene and antidolorin very pure and reliable, and he has recently tried anodynone and found it also satisfactory. He concludes with brief reports of over forty cases. He has used the drug in 153 cases without the slightest accident and with much comfort to the operator and patient.

American Medicine, Philadelphia.

January 3.

31 *Some Cardiorespiratory Phenomena Revealed by the Roentgen Rays. Albert Abrams.
32 A Case of Subacute Combined Sclerosis of the Spinal Cord. Charles S. Potts.
32½ The Etiology of Uterine and Pelvic Disease. Clarence L. Wheaton.
33 Transverse Position of the Child with Prolapse of the Arm and Impaction. Stricker Coles.
34 Two Examples of Parasitic Hematuria. L. Napoleon Boston.
35 Exophthalmic Goiter: Report of Case. K. S. Howlett.
36 The Gynecologic Examination. James H. Burtenshaw.

31. **Cardiorespiratory Phenomena Revealed by the X-Ray.**—Abrams describes the cardiac changes and movements as revealed by the *x*-rays, showing the position of the heart, as varied by attitude and respiration, aneurism, position of the diaphragm, dislocation of accommodation in aortic aneurism, old age, etc., the relation of the stomach and the colon to its position, the effects of coughing and laughter, amyl nitrite, rarefied and compressed air, etc. He does not think an *x*-ray study of heart pulsations supersedes the conventional physical signs unless it is in the diagnosis between enlarged heart and pericardial effusion. In the former the pulsation may be discerned, but not in the latter. He does not like to diagnose aneurism with no other aid than the rays. He points out that paroxysmal laughter causes the heart to bob up and down, and might be dangerous in cardiac disease, by inhibiting the return of the venous circulation and dislodging thrombi. The heart reflex consists in myocardial contraction from cardiac irritation in the precardial region. He finds that this can not be elicited when the cardiac muscle is beyond restitution in myocarditis, and it can be noted not only in transverse but in the sagittal diameter, and will often aid in excluding the murmurs of relative insufficiency. Here vigorous rubbing of the pericardium will temporarily dispel the latter murmurs. It can also be elicited from the nose, and he suggests the expediency of cocainization of the nasal mucosa before using an anesthetic, on account of possible affections of the heart. Many cases of death during anesthesia may be caused by undue stretching of the neck during chloroform or ether anesthesia. The lung reflex of Cherchevsky has been investigated by Abrams, who does not find it important in the diagnosis of arteriosclerosis. The lung reflexes of contraction and dilatation will be discussed in a future paper. He thinks they can be explained only by supposing two distinct functions of the vagus, one enabling it to dilate and one to contract the bronchioles.

Cincinnati Lancet-Clinic.

January 3.

37 Lung Surgery, Historical and Experimental. Benjamin M. Ricketts.
38 The Ups and Downs of a Physician's Life. (Concluded.) George J. Monroe.
39 Surgery of the Prostate, Pancreas and Diaphragm. (Continued.) B. Merrill Ricketts.

St. Louis Medical Review.

December 27, 1902

40 Practical Points in the Treatment of Floating Kidney. W. B. Davis.

Medical Fortnightly, St. Louis.

December 25, 1902.

41 *Burns and Scalds in Railroad Accidents. W. M. Piquard.
42 *The Neurologic Diagnosis of Traumatic Lesions of the Spinal Cord. Frank P. Norbury.
43 Syringomyelia. F. Savary Pearce.
44 The Treatment of Respiratory Diseases, with Especial Reference to the Employment of Terp-heroin. C. H. Powell.

41. **Burns and Scalds.**—A few points mentioned by Piquard in injuries from railroad accidents are: 1. The frequency of serious complications; 2, the need of thorough sterilization of the parts after removing the first of the temporary dressings. He uses a mild carbolic solution here for its anesthetic qualities. Moist dressings of saturated solution of picric acid are very useful in suppurating cases. In bad scalds of the hand it is very essential that the hand be straightened and placed in that position on a flat splint and kept there until well, otherwise the strong flexors will so contract the fingers as to make the hand useless. The same must be remembered as regards burns or scalds of the popliteal space, the elbow and the wrists, where mechanical appliances must also be used to prevent deformity.

42.—This article has appeared elsewhere. See THE JOURNAL, xxxix, title 91, p. 1346.

Illinois Medical Journal, Springfield.

December, 1902.

45 *Senile Pneumonia. David W. Reid.
46 *Pathology of the Kidney in Croupous Pneumonia. E. C. Franing.
47 *The Treatment of Pneumonia. N. S. Davis, Jr.
48 *The Use of the Colpeurynter in Obstetric Practice. Joseph B. De Lee.
49 *Deep Transverse Arrest of the Head as an Indication for Forceps. C. B. Reed.
50 *The Accidents of Anesthesia; Their Prevention and Treatment. Daniel N. Eisendrath.
51 Professor Lorenz's Bloodless Reduction of Congenital Dislocation of the Hip-Joint. Edmund Andrews.

45. **Senile Pneumonia.**—Reid remarks that the characteristic features of the disease may be entirely changed in elderly persons. The disease is insidious from the beginning. The symptoms may all be mild and yet the condition prove fatal. Pyrexia is never excessive; cough may be slight, and respiration not difficult in some cases. The crisis may not be well marked. Expectoration may also be absent. When an old person has a slight rigor followed by a rise of temperature, attended by great prostration, for which there is no explanation,

pneumonia may be suspected, though all the symptoms are absent. Reid thinks the increased mortality from pneumonia may be largely due to the diagnosis of senile pneumonia, which was formerly overlooked. He thinks that most of the fatal cases of influenza are complicated by pneumonia. After 40 each decade has a death rate of its own; after 60 the outlook is always unfavorable. In diagnosis we should look to the lungs; but in prognosis the heart is everything. As regards treatment, he advises caution in the use of digitalis, if it is used at all. Alcohol, if it is ever of service, should be in senile cases. Carbonate of ammonia has failed to hold its own in recent practice. Creosote has its advocates, but many doubt its effects. Strychnin has more friends and fewer enemies than any other drug in the pharmacopeia for these cases. Rest, quiet, ventilation, uniform temperature, easily-digested liquid food and intelligent conservative treatment of the symptoms will suffice for a cure in the great majority of uncomplicated cases under 50 years of age. Beyond this limit the mortality will be doubled and quadrupled. In his opinion heroic treatment has no place in the disease and the conservative course will save more lives than the opposite.

46. **Pathology of the Kidney in Croupous Pneumonia.**—Franing describes the conditions in the kidney, remarking especially on the congestive signs, granular degeneration of the epithelioma, fatty degeneration, edemas, etc. He says congestion is more or less marked in 70 per cent., and edema in practically all the congested cases; granular degeneration more or less marked in all and hyaline material in 60 per cent.; swollen tufts in practically all cases; infiltration of lymphocytes and plasma cells in 89 per cent., and of polymorphonuclear leucocytes in 25 per cent.; bacteria in a great majority of cases; hyaline casts in 80 per cent. and granular in a few, Pneumonia, he thinks, can no longer be considered a local infection of the lungs, but frequently a general bacteriemia.

47.—This article appeared in THE JOURNAL, xxxix, p. 1.

48. **Colpeurynter.**—De Lee gives the uses of the colpeurynter in obstetric practice and a historical sketch of the instrument. Its value is noted in induction of premature labor, hastening delivery or preparing for rapid delivery after symphysiotomy or version; in stenosis or rigidity of the cervix or weak pains; in cases of dry labor; in shoulder presentation as a substitute for the bag of waters which has ruptured; in prolapse of the cord; in lifting up the pregnant uterus for hyperemesis, or to replace a retroflexed incarcerated uterus; and especially in placenta previa, particularly in cases where the os is not fully dilated. He urges a wider employment of the rapid, simple procedure.

49. **Transverse Arrest of the Head.**—Reed concludes his article with the following summary:

Deep transverse arrest of the head is a relatively common complication in labor. The diagnosis is easily made from the position of the sagittal suture and the fontanelles. The normal termination of the case can not be awaited in most instances, but forceps should be applied as soon as it is evident that rotation will not occur spontaneously. The blades should be applied in that pelvic oblique diameter toward which the occiput lies. Location of the occiput must be determined before the blades are applied. Traction and rotation must be simultaneous.

50.—This article appeared elsewhere. See THE JOURNAL, xxxix, ¶4, p. 1416.

Washington Medical Annals, Washington, D. C.

November, 1902.

52 *Personality in Medical Education. Edward A. Balloch.
53 *The Treatment of Weak Feet and Flat Feet. A. R. Shands.
54 Case of Extra-uterine Pregnancy in Fourth Month; Operation. J. Taber Johnson and Robert Reyburn.
55 Case of Aneurism of Abdominal Aorta. E. W. Reisinger.
56 *Chronic Pancreatitis; with Report of a Case. B. L. Hardin.
57 *Chronic Interstitial Pancreatitis. I. S. Stone.
58 Traumatic Stricture of the Esophagus; Operation by Abbey's Method. W. C. Borden.
59 Congenital Hydronephrosis. G. N. Acker.
60 Case of Abscess of Brain. D. Percy Hickling.

52. **Personality in Medical Education.**—Balloch urges that the personal influence of the teacher should be impressed on the student. He thinks that in the future the great medical school of the country ought to be located in Washington, where the research, laboratory and other advantages are so great.

53. **Flat Foot.**—Shands points out the difference between flat foot and weak foot. Congenital flat feet are not here discussed. The static variety, he says, is most commonly seen in young persons at the time of approaching puberty, with weak muscular development and occupations requiring great strain on the muscles or ligaments that support the arch of the foot. Rapid growth favors it. Injuries of the ankle, ordinary strains, are often the cause of the condition and impairment of the strength of the ligaments and muscles, especially those that support the arch and those of the calf or tibials, the peroneous longus on the outer side in particular. Long standing causes them to tire, and in time to give way, thus flattening the arch. Ill-fitting shoes and acute rheumatism of the muscles are frequent causes, also osteitis, phlegmons about the sole of the foot and contracted tendo Achillis. The diagnosis of flat foot is easily made, but weak foot is not so easy. It is the primary stage of flat foot, and if recognized early and properly treated, flat foot will be avoided. He says a line let fall from the center of the knee cap should fall normally just to the outer side of the second toe, and any deviation from this is apt to indicate a weak condition of the supporting structures of the plantar arch. Eversion of the foot is the most common position of weak foot. Pigeon toe is often due to it also, and can be cured by support. The prophylactic treatment of flat foot should be begun as soon as the weakness is discovered, and he insists on the value of strapping the foot, especially in cases of sprained ankle, preventing serous infiltration and giving support until nature replaces the fibers of the tendons and ligaments. The treatment of flat foot is simple, but the ordinary shoe never properly conforms to the condition. The principal thing is to have the sole of the shoe slightly raised on the inner side. In the mild form of weak and painful foot about all that is necessary is to apply the adhesive plaster strips and then support the arch with a soft pad, fitted so as to conform to the arch as nearly as possible. He applies a pad over the adhesive plaster, holding it in place with two strips of the plaster, and over all applies a snug roller bandage. This is changed once a week, increasing the thickness of the pad each time until the arch is somewhat exaggerated and the painful symptoms have subsided. Then the treatment is continued by leaving off the adhesive plaster and applying a soft pad attached to an inner sole, being careful that the pad is high enough to support the arch in its normal position. In the severer cases, the Whitman flat-foot plate will be of use. In conclusion he insists on prophylaxis as the most important thing.

56 and 57. **Pancreatitis.**—The papers by Hardin and Stone are of interest as summaries of the subject and reports of cases, but contain nothing especially new.

Iowa Medical Journal, Des Moines.

December 15, 1902.

61 *The Gastrointestinal Type of Arteriosclerosis. Walter L. Bierring.
62 Pathology and Symptoms of Appendicitis. A. Siewert Weber.

61. **Gastrointestinal Arteriosclerosis.**—Bierring reports a case and discusses the condition. His conclusions are:

1. That arteriosclerosis produces definite and characteristic changes in the digestive organs, associated with well-marked clinical manifestations, so as to warrant the distinction of a gastrointestinal type. 2. On account of the fact that clinical symptoms closely resemble at one time gastric carcinoma, again intestinal obstruction and chronic diabetes, makes its recognition a matter of importance, especially on account of the influence that a diagnostic error may have on the treatment and in the lowering of the standard of family record transmitted to progeny. 3. Considering the pathologic anatomic changes peculiar to the gastrointestinal type and its possible sequelæ, the more general treatment suggests rest in bed, outdoor life and moderate exercise, indicated in other forms of arteriosclerosis as appropriate.

Merck's Archives, New York.

December, 1902.

63 *A Monograph on the Use of Cinnamic Acid and Sodium Cinnamate in the Treatment of Tuberculosis. (Continued.) William J. Robinson.
64 *Home Treatment for the Morphin Habit. H. A. Moody.

63. **Cinnamic Acid.**—In the conclusion of his article on the cinnamic acid treatment of tuberculosis, Robinson says that to regard the drug as a specific is ridiculous, and it is not so claimed by Landerer or Cantrowitz, his most ardent follower, but it is probably a useful adjunct in the treatment of the first stage of tuberculosis. The doses must be small to begin with and be very gradually increased. Landerer insists on this

point. It is contraindicated in cases inclined to hemorrhage, and soon after hemorrhage, and when the temperature is above 101 F. Should a rise of temperature follow its injection the dose is too large, and the next dose should be diminished one fourth or a half. There is no justification for mistrusting Landerer's statements, but it must be remembered that similar results are obtained without the use of this drug. The treatment is harmless if directions are followed. Too large doses may cause excessive serous exudation around the tubercle foci and carry some bacilli into the circulation. Given by the mouth the doses of sodium cinnamate may be large, but it remains to be shown whether, thus administered, it has any effect on the tuberculous processes. Taken altogether, Robinson's impression of sodium cinnamate as a curative agent in tuberculosis is a negative one. It is probably a useful stimulant, but he prefers creosote or some of its derivatives.

64. **The Morphin Habit.**—Moody's home treatment is mainly use of the bromids, with hyoscin and spartein as adjuvants.

Bulletin of the Johns Hopkins Hospital, Baltimore.

December, 1902.

65 *Recent Studies of Immunity, with Special Reference to Their Bearing on Pathology. William H. Welch.
66 *The Importance of a More Radical Operation in Carcinoma Cervicis Uteri as Suggested by Pathological Findings in the Parametrium. John A. Sampson.
67 *Nitrogen Excretion in Pneumonia, and Its Relation to Resolution. Henry W. Cook.

65.—See editorial in THE JOURNAL, xxxix, p. 1116.

66. **Carcinoma of the Cervix.**—Sampson insists on a more radical operation in these cases, and gives the details. The operation is similar to that of Wertheim. The lymphatics along the pelvic vessels, and also the parametrium, should be removed en masse with the uterus, because an enlarged gland is not necessarily an invaded gland, and cancer may be present in very small lymph nodes, making it impossible to always diagnosticate cancerous lymphatics. If the ureter should be adherent to the parametrium, the lower portion of it should be sacrificed and all the tissue from the cervix to the pelvic wall removed. If the ureter is dissected free, two things are very apt to occur: The disease will probably return and a ureterovaginal fistula will probably occur from injury to the blood supply of the ureter. The lymphatics should be removed from the pelvic vessels from above downward, together with the uterus and all the tissues lateral to the cervix from pelvic wall to pelvic wall undisturbed, including the lower 4 cm. of the ureters; and the ureters should be implanted in the bladder.

67. **Pneumonia.**—Nitrogen excretion in pneumonia is specially discussed by Cook, who sums up as follows:

1. In cases of pneumonia a surplus amount of nitrogen must be excreted during the days of resolution that will correspond at the least to the original quantity of exudate poured into the involved lung. In most cases there is more, the rest representing in great part a continuation of the formation and an absorption of inflammatory exudation, plus other tissue destruction.
2. In cases of marked delay in resolution the continued high nitrogen output indicates a continuation of the local inflammatory process, so that in those cases of several months' persistence we might speak of a chronic pneumonia.
3. In cases of rapid resolution the leucocytosis curve follows the curve of nitrogen excretion with a very striking parallelism, and would seem to point to a causal relation between leucocytes and resolution.

California State Journal of Medicine, San Francisco.

December, 1902.

68 *Necessity of Standardizing Materia Medica Products. F. E. Stewart.
69 Report of a Case of Bubonic Plague. E. L. Wemple.
70 *Points in the Management of Cleft Palate Cases, Before, During and After Operation. Harry M. Sherman.
71 Suturing of Muscles and Tendons. D. D. Crowley.

68. **Standardization of Drugs.**—Stewart illustrates the importance of the subject and recalls a former article published in THE JOURNAL of April 27, 1901, on a proposed national bureau of materia medica, giving the objects of such a bureau and its utility.

70. **Cleft Palate Cases.**—Sherman notes certain special points: the necessity of proper preparation of the patient, accustoming the child to the use of the spray, removal of adenoids, care of defective teeth, and in every way securing a clean mouth before operation. Chloroform is the anesthetic which he prefers, and he uses the position of Rose, holding the child's head on a towel pinned across the operator's knees, so that it can be rolled in either direction by raising one knee or the other, while the larynx and throat are easily kept free from blood. He illustrates the instruments. The operation he generally uses is the uranostaphylorrhaphy of Trelat. Occasionally he has followed the method of Ferguson of Chicago. He has used in the nose Dobell's solution, to which the child, who has been trained, submits with little resistance. He has used where this was not applicable in the mouth a 1 per cent. chloral solution, and for staphylococcic infection a 2 per cent. salicylic acid solution in alcohol. The child should be fed by the rectum. He had 13 patients and 26 operations. All the successes were by uranostaphylorrhaphy.

Brooklyn Medical Journal.

December, 1902.

72 Factors in the Ordinary Treatment of Eye Diseases. James C. Hancock.
73 *Some Peculiarities of Pelvic Pain. John Cowell MacEvitt.
74 *Points of Similarity and Difference in the Onset of Typhoid Fever and Appendicitis. William F. Campbell.
75 A Case of Multiple Ulcers of the Stomach in a Child; Sudden Death. C. F. Barber.
76 Report of Epileptiform Attacks Cured by Nasal Operation. Stephen H. Lutz.

73. **Pelvic Pain.**—The pain attending menstruation is especially noted by MacEvitt, who thinks that we can distinguish between ovarian and uterine pain by the constant and dull character of the former and the more intense and intermittent nature of the latter. The most puzzling thing about it is the inconstancy of the pain in relation to pathologic conditions. He has invariably met with the fact that the pain exists in inverse ratio to the size of the tumor cyst and the cystic degeneration of the ovary, the larger tumors often being comparatively painless even in their incipiency. He reports cases and considers that the sympathetic plays a more important rôle in the production of these pains than the cerebrospinal. The causes are, he holds, increased cell production, destructive processes affecting the nerves and the functional disturbances of sensibility, all three acting according to the condition.

74. **Typhoid and Appendicitis.**—Campbell points out the differences between typhoid and appendicitis, the prodromata and often apparently sudden onset of the former. The dry glazed tongue, stationary elevated temperature, comparatively slow pulse, general tenderness of a particular region, and general rigidity, if it exists, with the absence of leucocytosis, indicate typhoid. All these symptoms are the reverse in appendicitis. The only thing which seems to be common to the two is pain in the right iliac region, but this is limited to a special point in appendicitis, while it is more general in typhoid.

Therapeutic Gazette, Detroit, Mich.

December 15, 1902.

77 *The Treatment of Typhoid Fever. H. A. Hare.
78 *The Medicinal Treatment of Gallstones. H. Richardson.
79 *The Treatment of Rheumatoid Arthritis; with Special Reference to the Specific Action of Ferrous Iodid. J. R. Clemens.
80 Some Experiments as to the Best Manner of Administering Aspirin. E. C. Hill.
81 *The Treatment of Football Injuries Based on an Experience of Six Years. J. B. Carnett.

77. **Typhoid Fever.**—Hare is conservative in his treatment of typhoid, discouraging too active medication, yet he says the skilful use of drugs is not more needed in any other disease. To keep up the action of the kidneys he would give pure water in small quantities. There has been too little attention paid to the function of these organs in this disease. He is skeptical as regards intestinal antisepsis. The drugs used for this purpose are nearly all more or less directly eliminated by the kidneys. Possibly acetozone may prove to be an efficient intestinal antiseptic. He is also not enthusiastic as regards the cold bath, and especially deprecates the simultaneous use of the antipyretic coal-tar products. He finds the cold rubbing even more effective, though it requires more skill on the part of the assistant, and he speaks well of the use of the warm bath (85-90 F.) as a temperature reducing agent in this condition. It does not slow the heart or alarm the patient. Turpentine is an occasional remedy in advanced cases when the tongue is dry and the belly tympanitic. He thinks that in fear of heart failure we often stimulate too early. Aside from the favorable effect of the bath, he thinks most practitioners believe alcohol

is the stimulant par excellence in this condition, and that cold applied over the precordium is valuable in slowing a too rapid pulse. He is doubtful as to the value of digitalis, excepting in unusual cases. Strychnin is often overdone. For diet the patient does not need milk alone, but easily digested starchy foods, or foods of this type, helped in the digestive process by takadiastase or pancreatin. He also allows one or two soft-boiled eggs. With such a diet he thinks the patient is better able to resist typhoid infection. Medical treatment for hemorrhage is not effective. He does not see why a bleeding vessel in the intestine should be regarded differently from a bleeding vessel in the leg, and it is hard to see how remedies given internally can reach the spot. Saline infusions may be employed with advantages within certain limitations.

78. **Gallstones.**—Richardson advocates the use of glycocholate of soda as a solvent for gallstone, besides being the only real cholagogue we possess, purging the liver and assisting in the assimilation of fats from the intestine.

79. **Rheumatoid Arthritis.**—Clemens offers the following treatment as effective in rheumatoid arthritis: The use of syrup of iodid of iron in dram doses three times a day, which will remove the disease in two or three months. Iodism may occur, necessitating diminishing or withholding the medicine for a time. A generous diet should be an adjunct to the treatment.

81. **Football Injuries.**—Carnett describes the various injuries to which football players are liable and which he thinks are usually not serious. The fatalities that occur in football usually take place in smaller colleges and with men who are novices at the sport and physically unfit. The preliminary practice, with hygiene, regulated habits, proper diet, etc., hardens the players so that the injuries which may be serious to others are comparatively slight with them, and the use of proper apparatus for guards minimizes the danger of some of them. He reviews the more formidable injuries and their treatment. Many of them may be painful and yet not absolutely disabling.

International Journal of Surgery, New York.

January.

82 Prostatic Hypertrophy. W. B. Jones.
83 Nose and Throat Work for the General Practitioner. (Continued.) George L. Richards.
84 Congenital Deformities of the Prostate. G. Frank Lydston.
85 The Technics of Amputations. (Continued.) Robert H. Cowan.
86 *Stone in the Kidney, with Report of Two Cases. Max Rogers.
87 The Surgical Assistant. Walter M. Brickner.
88 A Case of Volvulus with Torsion of the Entire Mesentery—Operation; Recovery. George T. Vaughan.
89 A Case of Chronic Gastralgia Due to Adhesions Following Perforating Peptic Ulcer—Operation; Recovery. A. L. Bennett.
90 Laminectomy for Fracture Dislocation of Fourth and Fifth Cervical Vertebræ. Joseph R. Eastman.

86.—See abstract in THE JOURNAL, xxxix, p. 1411.

Carolina Medical Journal, Charlotte, N. C.

December, 1902.

91 *The Present-Day Mortality of Pneumonia. Alex. G. Brown.
92 Hydrotherapy; with Reference to the Mineral Water from the Vade Mecum Spring of Vade Mecum, N. C. H. H. Kapp.

91.—This article has appeared elsewhere. See THE JOURNAL, xxxix, title 45, p. 1547.

Medical Review of Reviews, New York.

December 25, 1902.

93 Disinfection and Disinfectants. A. H. Doty.

New Orleans Medical and Surgical Journal.

January.

94 Cancer of the Breast. E. D. Martin.
95 A Case of Prolonged Gestation. B. A. Colomb.
96 Multiple Urethral (Perineal) Fistulæ of Eight Years' Duration—External Urethrotomy, Modified Cook's Procedure—Anamnesis—Preliminary Observations. B. A. Terrett.
97 Congenital Absence of Rectum; Gut-track Opening in Bladder. J. E. Doussan.

Toledo Medical and Surgical Reporter.

January.

98 Effect of Study upon the Eye, with Question of Proper Lighting of Rooms. Charles Lukens.
99 Report of a Case of Gunshot Wound of the Abdomen with X-Ray Demonstration of Bullet and Exhibition of Case. William H. Fisher.
100 Hysteria. J. T. Woods.
101 School Hours from Standpoint of Teacher. Elvene C. Hard.

Journal of Medicine and Science, Portland, Me.

December, 1902.

102 State Laboratories of New England. F. N. Whittier.
103 Criticisms on Christian Science. E. H. Judkins.

Clinical Review, Chicago.

January.

104 A Surgical Clinic (Epithelioma Involving the Temporal Region, Etc.) N. Senn.
105 Glimpses at European Gynecology and Obstetrics. (Continued.) Henry F. Lewis.
106 Clinical Lectures upon the Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.

Columbus Medical Journal.

December, 1902.

107 Some Applications of the Principles of Infection and Immunity. (Continued.) George F. Zinninger.
108 Points for the Insurance Examiner—Obligation of Examiner to Applicant and Company. G. M. Waters.
109 Indications of Incipient Phthisis. J. H. J. Upham.
110 Differential Diagnosis of Inorganic, Functional, Anemic, or Hemic Cardiac Murmurs. N. R. Coleman.
111 Signs and Symptoms Which May Prognosticate Grave Nervous Degeneration. W. D. Deuschle.

Oklahoma Medical News-Journal, Oklahoma City.

December, 1902.

112 The Effect of Estivo Fever on the Muscular System, with Special Reference to the Heart Muscle. Ira B. Bartle.
113 The Treatment of Hysteria. John W. Duke.

Texas Medical News, Austin.

December, 1902.

114 Therapeutic Reports of Saloquinin. J. P. Oliver.
115 Sexual Neurasthenia. J. A. Holloway.
116 Hysteria. J. W. Torbett.
117 Parenchymatous Nephritis. Wm. P. Fleming.
118 The Medical Society—Its Relation to the Profession. E. P. McKinney.

Vermont Medical Monthly, Burlington.

November 25, 1902.

119 Address on Gynecology, Vermont State Medical Society. A. Lapthorn Smith.
120 Medicolegal Autopsy. M. J. Wiltse.
121 Cerebral Apoplexy. J. W. Jackson.

Canadian Journal of Medicine and Surgery, Toronto.

January.

122 The Ethical Value of Education in Preventive Medicine. Peter H. Bryce.
123 Prevention and Treatment of Tuberculosis. J. F. MacDonald.
124 Report of a Case of Fracture Through the Site of an Excision of the Knee. H. P. H. Galloway.

Dominion Medical Monthly, Toronto.

December, 1902.

125 President's Address—British Columbia Medical Association. R. E. Walker.
126 Presidential Address—Executive Health Officers' Association of Ontario. E. E. Kitchen.
127 Excision of Shoulder for Myeloid Sarcoma. G. Silverthorn.
128 Case of Fibrocystic Tumor of the Uterus Filling Left Broad Ligament; Removal, Recovery. A. Lapthorn Smith.
129 Perforating Ulcer of the Duodenum—Report of a Case. George Elliott.

Canadian Practitioner and Review, Toronto.

December, 1902.

130 President's Address, Toronto Clinical Society. Edmund E. King.

Southern Practitioner, Nashville, Tenn.

January.

131 Visceral Syphilis—Hepatic. J. A. Witherspoon.
132 Nose and Throat Affections. C. H. Powell.

Denver Medical Times.

December, 1902.

133 Some Observations on the Home Treatment of Insanity. C. H. Soller.
134 Some Thoughts on Syphilis. Melville Black.
135 The Cure of Strabismus. Edward Jackson.

Southern California Practitioner, Los Angeles.

December, 1902.

136 General Sanitation. J. M. Wheat.
137 California State Board Examinations. Smith L. Walker.
138 American Oculist in Berlin. A. C. Rogers.
139 An Antispasmodic. John Dickson.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

December 20, 1902.

1 *The Transference of Bovine Tuberculosis to Man. Robert Koch.
2 *On Malaria. William MacGregor.
3 Report of a Case of Bilharzia from the West Indies. P. Manson.

4 *Serum Reaction of "Bacillus Pestis" in Plague. R. Row.
5 Unrecognized Influenza. J. W. Washbourn and J. W. H. Eyre.
6 *On "Dysphasia" or Aphasia as an Initial Symptom of Tuberculous Meningitis. M. McIntyre Sinclair.
7 A Note on Some Cases Mistaken for Smallpox During the Recent Epidemic. Charles Fraser.

December 27, 1902.

8 *On the Growth of Bacteria in the Intestine. J. Lorrain Smith and J. Tennant.
9 *Two Cases of Obscure Abdominal Pain: Operations; Results. Eric Pritchard and William Bennett.
10 *Note on the Value of Roux's Operation for the Radical Cure of Femoral Hernia. J. Crawford Renton.
11 On the Treatment of Glycosuria and Diabetes Mellitus with Aspirin. R. T. Williamson.

1. **Bovine and Human Tuberculosis.**—This address at the Congress of Tuberculosis in Berlin was reviewed in the original. See THE JOURNAL, Dec. 20, 1902, page 1625, title 48.

2. **Malaria.**—MacGregor reviews the subject and the methods of combating it with special reference to the experience at Lagos. He shows Koch's preventive method of using quinin to be of real utility and says objections to it largely rest on misapprehension. The superstition, as he calls it, that quinin, even perhaps in moderate doses, produces black water fever, he says, dies hard. Mechanical prophylaxis by screens and drainage and otherwise destruction of breeding places are treated at some length. He believes that much can thus be accomplished and he does not see the utility or necessity of Europeans isolating themselves from the natives. At Lagos they attacked malaria at all points, by Koch's method and by defensive and offensive measures. He believes that considerable amelioration of the disease in this excessively malaria infected region has been attained.

4. **Bacillus Pestis.**—In this preliminary communication Row gives the results of experiments with the serum of convalescents from plague and finds that it has a remarkable bactericidal efficiency against *Bacillus pestis*. This has been observed in convalescents of over six weeks and has been maintained, though to a less extent, in two patients who had had the plague twelve to eighteen months previously. The serum of patients in the very early stage of the disease is certainly inhibitory to the growth of *Bacillus pestis* while that from normal individuals gives very good growths, though varying in different individuals, but not one instance has been found where the blood had completely destroyed the growth. The value of the serum reaction, therefore, is of scientific interest, but Row thinks it is of doubtful value from a diagnostic point of view, since the observation takes at least twenty-four hours to give a pronounced opinion and the clinical features of the disease develop with such rapidity as to allow no question as to its nature. Yet in a suspected or convalescent new arrival, a positive reaction—that is absence of *Bacillus pestis* in drop cultures—would be of value in giving definite information on which to take preventive measures. He is still studying the reaction in Haffkinized subjects at the various stages before and after inoculation, but his results are not yet ready for publication.

6. **Tuberculous Meningitis.**—Sinclair reports a case characterized by the appearance of transient early aphasia and dysphasia and reports two others from the literature. In each case the trouble was in the initial stages of the meningitis, though secondary to tuberculous disease existing elsewhere, and he suggests that the occurrence of aphasia even of transitory character in a person already suffering from any form of tuberculous disease should be looked on with grave suspicion.

8. **Growth of Bacteria in the Intestine.**—Smith and Tennant report experiments on dogs and rabbits in which they made direct observations of the number of bacteria in the contents of the intestine at short intervals in its course using careful aseptic precautions, opening the intestine with a sterilized knife. They also had an opportunity of studying an example of the human intestine in conditions favorable for the purpose of research in a case of accidental death a few hours before the examination. The results of investigation and their bearing on the pathology of a number of diseases are discussed. They show that the small intestine through most of its course is comparatively sterile while the focus of bacterial disturbance is in the region of the ileocecal junction. The power of inhibiting bacterial growth having become impaired, the bacteria which occur naturally in the large intestine become more abundant and approximately similar changes occur in the small intestine. These occur to a greater extent near the ileocecal valve than in the higher portions of the small intestine and this is just the region which is liable to be subject to attacks of inflammation, as in appendicitis, typhlitis, typhoid fever, and intestinal tuberculosis, etc. Pathogenic bacteria taken by the mouth will be restrained from multiplying until the lower ileum has been reached. In the human subject exactly the same condition was found as in animals.

9. **Obscure Abdominal Pain.**—Bennett reports two cases, both puzzling as to the diagnosis, in which operation revealed no adequate cause for the symptoms. In one there was before operation no doubt as to there being obstructive jaundice, either simple or complicated, and yet operation showed that there was nothing to support such a diagnosis in either the liver, gall bladder or gall duct. It is a curious fact, too, that anodynes of the nature of phenacetin had more complete control over the pain than morphin injections, and it is noticeable also that after the urine and feces had become perfectly normal, the main features of the case showed very little alteration. The subsidence of symptoms after operation suggested functional nervous disturbance, but it is hard to see how this could account for all the symptoms of illness and of high temperature lasting nearly four months. In the second case diverse diagnoses were made, including gastric catarrh, duodenal ulcer, gallstones, gastroptosis, cancer, etc. There was found a perfectly normal gastric mucous membrane and a normal pylorus with no signs of chronic catarrh and no scars of ulcers, though old fibrous adhesions were found. He suggests a possible edematous condition of the duodenum or pylorus with disturbed innervation and neuralgic pain might account for the fibrous hyperplasia that was found. In a note to the article Sir William Bennett suggests that complete relief, which at the time of the writing was not apparent, will ensue later, as the result of treatment, and Pritchard, in a later note, says that this prediction has been partially realized.

10. **Hernia.**—Renton calls attention to Roux's radical method, the peculiar feature of which is the holding down of Poupart's ligament by a metal staple passed obliquely through it over the crural canal and into the pubic bone. It must be driven in securely but not tight enough to injure the ligament, and gives no trouble, remaining *in situ* in over 60 cases operated on by Roux. Renton has found the method very satisfactory.

The Lancet, London.

December 20, 1902.

12 *Acute Poliomyelitis and Encephalitis. Frederick E. Batten.
13 *Congenital Hypertrophic Stenosis of the Pylorus and Its Treatment by Pyloroplasty. E. Cautley and C. T. Dent.
14 *On the Treatment of Diphtheria by the Intravenous Administration of Antidiphtheria Serum. D. Louis Cairns.
15 *Some Facts Bearing on the Vaccination Controversy Drawn from the Recent Epidemic of Smallpox in Southwest Essex. Charles Fraser.
16 Volvulus of the Small Intestine. Arthur H. Burgess.

December 27, 1902

17 The Relation of the Members of the Medical Profession to Each Other and to the Public. John Campbell.
18 *The Prevention of Typhoid Fever in Armies. H. E. Leigh Canney.
19 *Reflexes: Their Relation to Diagnosis in Rheumatoid Arthritis. R. Llewellyn Jones.
20 Operation for Chronic Ulcer of the Stomach. C. W. Mansell Moullin.
21 Congenital Hypertrophic Stenosis of the Pylorus. Clive Riviere.

12. **Poliomyelitis.**—Several cases are reported by Batten illustrating the different forms of superior and inferior polioencephalitis and poliomyelitis. He discusses the pathology and considers that there are decided evidences in favor of its being directly due to primary vascular thrombosis and that its direct bacterial origin is supported by the fact of its prevalence during certain periods of the year and its occurrence in epidemics. His arguments are drawn chiefly from pathologic examination of the spinal cord, but he thinks they apply equally to the cerebral cases.

13. **Congenital Hypertrophic Stenosis of the Pylorus.**—Cautley and Dent have seen a number of cases, two of which are detailed; they discuss the operative treatment. They see

decided objections to pylorectomy, considering that it is too severe an operation. Gastroenterostomy has been employed in nine cases, with four recoveries. Their objections to this operation are stated as follows: That it necessitates considerable exposure of the abdominal contents, must necessarily be protracted and that there is increased risk of protrusion of the intestine, and the incision has to be extensive. Anterior gastroenterostomy has been adopted in all cases; posterior gastroenterostomy, the better operation of the two, is still less practicable in children. Dilation of the pylorus, some form of Loreta's operation, has been performed in six cases with four recoveries. Pyloroplasty was performed in the two cases reported, and in another recent case. It would appear that the balance of opinion is decidedly in favor of gastroenterostomy, that pyloroplasty is not so much an unsuitable as an impracticable operation, but this is contradicted by their experience. The operation is really much easier when fixation is due to muscular hypertrophy as in congenital pyloric stenosis, and they describe their technic. They think in these cases it is preferable to dilation because it can be done at least as quickly, it is a more definite proceeding and allows more range. The lumen of the tube can be examined, and if desirable the longitudinal fold of mucous membrane can be removed. The exact amount of injury to the parts is known. There is no advantage, they think, in performing what is called "submucous pyloroplasty," and it is better to divide all the coats. The etiology of the condition is considered, on the whole, not very clear. The balance of evidence is in favor of the hyperplasia being primary.

14. **Diphtheria.**—Cairns parallels plague and diphtheria in their reaction to serum treatment and sees a striking analogy. There is the same local action at first, followed by a tendency to dissemination of the organism. Special involvement of the lungs is particularly noted and the advantages of intravenous injections of antitoxin pointed out. In 20 out of 50 consecutive cases this method was followed, and in a fairly severe type of the disease, 31 of the 50 being laryngeal cases, 15 of them complicated by bronchial pneumonia of more or less severity. In 17 tracheotomy was performed. The mortality was 6 per cent. as compared with 10.7 per cent. in the previous year, in spite of the greater severity of the cases. The three deaths were respectively due to malignant diphtheria, to paralysis complicated by chorea in the sixth week of illness, and to double bronchopneumonia in a marasmic child aged 2. The high rate of recoveries is, he thinks, to be attributed to the intravenous injections, and the dose employed varied from 20,000 to 35,000 units. The largest amount injected was 82,000 units in three separate doses, and in spite of the large quantities no untoward results beyond the usual serum rash and pyrexia were observed. The method was first employed in only apparently hopeless cases and later in cases which, though very severe, promised some chance of recovery. It has not yet been employed in the milder cases of the disease. The general indications for its use were considered to be the following: 1. Malignancy, with hemorrhage from the nose or into the skin by glandular enlargement, and by extreme blanching of the skin; 2, any marked involvement of the lungs, either on admission or subsequently; 3, a moribund condition on admission; 4, a profoundly toxic condition of the patient. In such cases an initial dose of 20,000 to 25,000 units is perhaps not excessive. If the patient fails to respond the dose can be safely repeated. While the number of cases was small they were strictly consecutive and not selected cases.

15. **Smallpox.**—Fraser gives some statistics of the recent epidemic in Southwest Essex, dividing the cases into those which had been once vaccinated, and those which had not been vaccinated at all. Of the former there were 271 cases, of the latter 857. The proportion of mild cases was 36 per cent. vaccinated and 8 per cent. unvaccinated; the discrete were alike 45 per cent. in each, while the confluent cases were 19 in the vaccinated and 47 in the unvaccinated. This shows the protective power of even a single vaccination in infancy as regards the incidence and severity of the disease.

18. **Typhoid in the Army.**—Canney reviews the experience in typhoid fever during military operations, in the recent British and United States wars, and considers that the aerial connection and that by flies must be considered as only of secondary importance to the water conveyance of the disorder. He gives a plan of water supply for armies involving a special water force to see that boiled water alone is used and also for the training of sanitary officers and the medical corps of the army in sanitation.

19. **Reflexes in Rheumatoid Arthritis.**—Jones shows that the increase of deep reflexes is not uniform, while the superficial ones show a marked variability. He has studied them especially in asymetrical cases, and discusses their bearing on the pathology. He thinks the evidence in favor of the infective theory is strong, still proof of spinal change is wanting. He does not, however, believe that specificity can be claimed for any one particular microbe. Given any source of auto-intoxication the resulting toxemia may, through its action in the cord segments, produce what is called rheumatic arthritis, nor does he consider the disease confined to the anterior segments, as does Bannatyne. There is an undue tendency, he says, to centralize all the disease in the joints, to the unfair exclusion of the muscular and sensory symptoms. Increased myotatic irritability is not the only symptom pointing to affection of the muscular system and the changes in the muscular and sensory realms at an early stage of the disorder merit more careful attention.

Australasian Medical Gazette, Sydney.

November 20, 1902.

22 A Cerebral Hydatid Cyst: Removal; Recovery. George E. Rennie and W. H. Crago.
23 Notes on Gastroenterostomy. C. S. Hawkes.
24 A Case of Tumor of the Spinal Cord with Necropsy. Sinclair Gillies and Dr. Flachman.
25 Congenital Hypertrophic Stenosis of the Pylorus. Alfred A. Lendon.
26 Note on a Specimen of Ecchinococcus Multilocularis—A Rare Form of Hydatid Disease. William J. Munro.
27 A Complicated Hysterectomy: With a Few Remarks on the Desirability of Early Operation in Uterine Fibroids. J. A. G. Hamilton.
28 A Case of Eclampsia. R. W. McCredie.
29 Acute Colitis. F. S. Hone.
30 Acute Colitis. H. M. Evans.

Intercolonial Medical Journal of Australasia, Melbourne.

November 20, 1902.

31 Eczema: Ancient and Modern. A. Lewers.

Annales of Dermatologie, Paris.

33 (III, No. 11.) Anatomie pathologique du verrucome de Carrion (verrugas of Peru). E. E. Escomel (Lima).
34 Contribution à l'étude des sarkoides de Boeck. H. Hallopeau and Eck.

Bulletin de l'Academie de Medecine, Paris.

35 (LXVI, 39.) *Gelo-diagnostic des selles (stools) dans la fièvre typhoide. Chantemesse.
36 (No. 40.) Sur une mission en Algérie au sujet de la vaccination. Saint-Yves Menard.
37 Sur le traitement de l'appendicite. L. G. Richelot.
38 La médication arrhénique dans la peste, le nagana, le mal de Cadera, la fièvre du Texas, la malaria. A. Gautier.

35. **Gelose Diagnosis of Typhoid Fever Stools.**—Chantemesse announces that by means of his gelose diagnosis he was able to differentiate typhoid fever in eighteen to twenty-four hours, and in some cases even before the disease had progressed sufficiently to allow serum diagnosis. He also states that this gelose method revealed the presence of typhoid germs in the stools for more than a month after the patients had completely recovered. He thinks that the early diagnosis possible by this method justifies the establishment of central headquarters for it, similar to those for the diagnosis of diphtheria, with a view to serum treatment, which is the more effectual the prompter it is instituted. The technic of the gelo-diagnosis was described in No. 27 of the Bulletin (July 8). It is based on the relatively greater resistance of the typhoid bacillus to phenic acid, and the absence of fermentation of lactose. The suspected material is sown on appropriate culture media and gelose then inoculated with superficial colonies of the bacilli. They are then treated with phenic acid which destroys all but the typhoid and colon bacilli. These two germs are then differentiated by cultivating them on a medium containing lactose and litmus. The colon colonies are reddish, while the typhoid are blue. The diagnosis is completed by agglutination.

Presse Medicale, Paris.

39 (II, No. 97.) Les enfants débiles. P. Budin.
40 *La communication des abscès par congestion avec les bronches. Bentz.
41 *Technique actuelle de la rachicocainisation. T. Tuffier.
42 (No. 98.) Examen des yeux (eyes) au point de vue médico-légal (accidents du travail). F. de Lapersonne.
43 *De l'emploi du massage chez les tabétiques. G. Constensoux.
44 *Traitement du diabète. R. Romme.
45 (No. 99.) *Pathogenie du tabes dorsal. J. Nageotte.
46 Le phosphore et ses dérivés dans la tuberculose. A. F. Plicque.
47 (No. 100.) Acquisitions récentes sur la digestion intestinale. Sécrétine et entérokinate. E. Enriquez and L. Hallion.
48 *Le radium. Application au traitement du lupus. F. Trémolières.
49 Les pesées (weighing) régulières chez les cardiaques. R. Romme.
50 (No. 101.) Les conditions de l'intervention dans la chirurgie urinaire. Guyon.
51 L'ulmarène dans les affections rheumatismales. A. Mesnard.
52 (No. 102.) Les nucléines en thérapeutique. A. Martinet.
53 Nouvel apparat pour la chloroformisation (Appareil du Dr. Roth-Draeger). F. Jayle.
54 Les principaux dissolvants de l'acide urique. V. Griffon.
55 (No. 103.) *Serothérapie de la fièvre typhoïde. Chantemesse.
56 Les ferments du lait (milk). P. Merklen.

40. **Communication of Abscess with Bronchi.**—Bentz was treating an abscess in the right iliac fossa due to the production of pus in a tuberculous focus in the spine. Iodoformed vaselin was injected at various times, and a solution of hydrogen dioxid. After four months of this treatment, one day as the wound was being dressed the child coughed up a quantity of the foaming hydrogen dioxid, which was being injected in the iliac fistula. The phenomenon occurred only once, but the child has developed a tuberculous lesion in the lungs which had previously appeared to be sound. Fraenkel and Remy have published each a similar case of communication with the bronchus of an abscess appearing at a distance from the place where the pus is formed. Both children recovered. In Remy's case the child had had a vomica, but in the other cases no symptoms before or afterward indicated an opening into the bronchi. The small rupture in the wall must have closed spontaneously after the passage of the fluid, which was probably injected into the iliac or hip fistula with more force than was realized. Caution is necessary in making injections in a case where the location of the primary focus suggests possible communication with the air-passages.

41. **Technic of Spinal Cocainization.**—Tuffier has adopted the modification of using the patient's own cerebrospinal fluid as the vehicle for the cocain, but he considers it dangerous to mix them exposed to the air for fear of possible infection from germs in the air. He sterilizes according to Tyndall a sealed vial containing 4 cg. of cocain dissolved in 7 drops of sterilized distilled water. This makes a 12 per cent. solution. He breaks the tip of the vial and aspirates its contents into the syringe, allowing no air to enter with it. He then makes the lumbar puncture with the needle detached from the rest of the syringe. As soon as the cerebrospinal fluid is flowing through the syringe he adjusts the body of the syringe to the needle, and the cerebrospinal fluid flows into it, slowly pushing up the piston as it enters, until the receptacle is full, and blends with the concentrated solution of cocain already in it. He then injects the mixed fluid. The anesthesia does not extend so high as by his previous technic; it is of shorter duration, is slower in appearing and is less perfect, but on the other hand, the after-effects are infinitely less. He performed more than 1,200 operations of all kinds on the abdomen by his old technic, but with the new the radical operation for hernia is the highest intervention possible with the present method of anesthesia. For interventions above this he resorts to his former technic. He has been using the present technic for more than a year now, after thorough tests had established that the two fluids blend perfectly.

43. **Massage in Tabes.**—Costensoux regards massage in tabes as a general tonic, and a means of combating certain sensory troubles and certain complications. It must always be gentle and brief, as tabetic subjects are unable to bear fatigue, and for this reason massage of the muscles should be avoided. It should be restricted to the skin and should be done by a physician conversant with tabes or by a masseur strictly obedient to instructions. Passive mobilization of joints is contraindicated and active movements should be along the lines of re-education. All massage in tabes must be scrupulously individualized to the case, bearing in mind that what may benefit one patient may harm another.

44. **Eichhorst's Treatment of Diabetes.**—Romme reviews the results of Eichhorst's experience recently published (see THE JOURNAL, xxxix, p. 1217, title 93). He proscribes absolutely all medication and alcohol, and attributes but little if any value to mineral waters. He regards the diet as of paramount importance and adapts it to the individual case with frequent weighing to determine progress. He says that he would rather have a diabetic in good condition even at the expense of a little sugar in the urine, rather than to completely banish the sugar and have the patient growing thinner and weaker all the time. He does not alter the diet abruptly, but proceeds gradually, allowing for beverages weak coffee or tea, water or an alkaline water to which lactic or citric acid is added.

45. **Pathogenesis of Dorsal Tabes.**—Nageotte describes and illustrates the invasion of the nerve roots by the syphilitic meningeal inflammation which he has previously described under the name of interstitial transverse radicular neuritis. The radicular neuritis is not an inevitable but merely a frequent consequence of syphilitic meningeal lesions, but it invariably accompanies tabes. This radicular neuritis may also occur in the course of non-syphilitic affections.

48. **Radium for Lupus.**—Trémolières states that several of Danlos' patients treated more than a year ago have shown no sign of recurrence of the lupus. The radium is applied in the form of a powder in a small celluloid or rubber bag or sachet, containing a mixture of barium chlorid and radium chlorid. It is held in place over the lupus patch with a strip of gauze and left for six hours to five days. The area ulcerates in one to three weeks and heals with a smooth supple scar in twenty to twenty-five days. (See THE JOURNAL, xxxix, p. 728.)

55. **Typhoid Serotherapy.**—This communication from Chantemesse was hailed as marking an epoch when presented at the Egyptian Medical Congress which has just closed its sessions. Chantemesse compares the results of the treatment of typhoid fever during twenty months at all the hospitals of Paris with the results obtained by him at "Bastion 29" where he had 186 typhoid fever patients during the same interval. At the other hospitals the mortality was 286 in 1,192 cases, that is, an average proportion of 19.3 per cent. Even in the hospitals with the lowest mortality it never fell below 12 per cent. At Bastion 29, on the other hand, where the serum treatment was combined with balneotherapy, there were only 7 deaths, or a mortality of 3.7 per cent. in 186 cases. Three of the patients were practically moribund when received. To this 186 he adds the 70 reported last year, with 4 deaths, and the 100 of the year before, with 6 deaths, a total at Bastion 29 of 356 typhoid fever cases with an average mortality of 4.7 per cent. The method has also been applied in 151 cases at Toulon and even in inexperienced hands reduced the mortality to 13 cases. This brings the total to 507 cases of typhoid fever, all in adults, with 30 deaths, a total mortality below 6 per cent. One of the finest examples of the power of the serum is shown in the rapid healing of typhoid osteitis and periosteitis after local injection of the serum. He has witnessed several cases in which inflammatory osteo-periostitis, suppurating for years, soon healed under the influence of a drop or two of the serum repeated every fifteenth day. The difference between the aspect of the organs of treated and non-treated animals is apparent even to the naked eye. In the latter, after inoculation of typhoid infection, the spleen and marrow are intensely congested, and the lymphoid apparatus exhibits a slight deleterious reaction. In the animals treated with the serum the spleen and marrow are likewise swollen, but the tumefaction is not caused by congestion, but by an enormous reactionary hypertrophy of the lymphoid and myeloid tissue. The corpuscles in the spleen are unusually large and the lymphatic cells unusually numerous. The trabeculæ are also in active reviviscence. The fat is absorbed, and the trabeculæ are crowded with a large number of young cells, generally with basophile protoplasm. Typhoid bacilli injected into the ear of a rabbit continue to grow and flourish as in a

culture medium. But if the animal has been injected with 2 or 3 c.c. of the serum a few hours beforehand, the majority of the bacilli are taken up by the phagocytes and rapidly destroyed. The effect of typhoid toxin, injected in the place of the bacilli, is neutralized in the same way by a previous injection of the serum. In short, the serum acts by stimulating to extra activity not only the phagocytes but also the apparatus which produces them, if the latter is still capable of responding to the stimulus. The serum is, therefore, most useful at the onset of the disease. After the system is saturated with the infection, the serum must be applied with caution and weak doses given not to do harm by the reaction invoked. Consequently experience and skill in its administration are required to judge of the proper dose when the disease is in an advanced stage. Even if the presumptive diagnosis of typhoid fever at the onset proves to be erroneous, and the patient is found later to be suffering from some other disease, no harm can follow the injection of a dose of 2 c.c. of the serum. Chantemesse always supplements serotherapy with balneotherapy, and considers the latter an indispensable adjuvant.

Revue de Chirurgie, Paris.

57 (XXII, 11.) Report of French Congress of Surgery. Main Addresses on Surgery of Heart and Treatment of Tetanus.
58 (No. 12.) L'hérédité des ganglions synoviaux. Ch. Féré.
59 Du mécanisme des luxations de l'humérus causées par action musculaire. A. de Hints.
60 *L'ulcère simple du gros (large) intestin. E. Quénu and P. Duval. (Commenced in No. 11.)
61 Le chlorure d'éthyle (ethyl chlorid) en anesthésie générale. H. Girard. (Commenced in No. 11.)

57. **Surgery of Heart.**—Terrier's address was reviewed in THE JOURNAL of Nov. 22, 1902, p. 1355.

57. **Treatment of Tetanus.**—Vallas' address was reviewed in THE JOURNAL of Jan. 3, 1903, p. 42.

60. **Simple Ulcer of Large Intestine.**—Quénu gives the details of 26 cases of simple ulcer which he has found in the literature, mentions 3 more of American origin, known only by title, and describes a case personally observed and 4 communicated to him by Tédenat. He discusses the history, etiology, pathology, symptomatology and treatment, assuming that simple ulcer, such as is common in the stomach, may occur at any point along the entire alimentary tract. The cause is undoubtedly a dystrophic condition of the intestinal wall due to lesions in the arterioles and these due in turn to some general intoxication of bacterial or other origin. An ulcer in the colon has no pathognomonic symptoms, but the existence of painful spasmodic constipation with a fixed pain, spontaneous and provoked, always the same, even in the midst of radiating pains, suggests a subjacent local lesion and differentiates the ulcer from simple constipation. Colitis, on the contrary, whatever its nature, is accompanied by a more diffuse pain and palpation is painful along the entire length of the intestine. In colitis, also, pus, false membranes, bloody slime, etc., may be noted in the stools in case of ulceration of the mucosa, but they are not found with simple ulcer on account probably of the small extent of the lesion. Experience to date indicates that slight hemorrhage locates the ulcer in the colon while severe hemorrhage locates it in the rectum. Whether the lesion thus located in the colon be an adhesion, a neoplasm or an ulcer, all require exploratory laparotomy, and in the latter case as prompt as possible to forestall perforation. Parker's patient had been treated for appendicitis six weeks before perforation of an ulcer in the colon. There are only five operations on record for simple ulcer of the large intestine, with three recoveries. The surrounding tissues are usually sound and treatment of a perforated simple ulcer may be restricted to suturing the edges together after turning them in. Resection of the edges does not seem to be necessary. In case the ulcer is merely suspected and has not perforated, simple invagination of the affected zone or economical resection of the ulcer is advisable if the aspect of the serosa allows its site to be determined. If the serosa is of normal aspect it is impossible to locate the ulcer from without. Perforation occurred in 19 of the 27 cases he reviews.

Deutsches Archiv f. Klin. Medicin, Leipsic.

62 (LXXIV, Nos. 1-2.) Blood Pressure in Disease. Buttermann.—Ueber das Verhalten des Blutdruckes bei Kranken.
63 Zur Pathologie der Bronchitis fibrinosa. H. Hochhaus.
64 Klinische Beiträge zur Frage der Hämolyse. E. Hedinger.
65 Inoculation of Animals as Aid in Diagnosis of Tuberculous Pleuritic Effusions. J. A. Grober.—Der Thierversuch als Hulfsmittel zur Erkennung der tuberculösen Natur pleuritischer Exsudate, seine Methodik und die Bewerthung seiner Ergebnisse.
66 Ueber multiple Divertikel-Bildung im Dickdarm (large intestine). L. Schreiber.
67 Vorkommen und Verbreitungsweise der Bacterien bei der Pneumonie. W. Müller.
68 Alloxur Bodies and Gout. M. Kaufmann and L. Möhr.— Beitrage zur Alloxurkorper-Frage und zur Pathologie der Gicht.
69 *Injurious Action of Salicylic Medication on Urinary Passages. H. Lüthje.—Ueber die Wirkung von Salicylpräparaten auf die Harnwege nebst einigen Bemerkungen über die Genese der Cylinder und Cylindroide.
70 Ueber die Beeinflussing (influence on) der Acidität des Harnes (urine) durch Rhodan-Verbindungen. A. Hausmann.
71 Ueber abnorme Sehnefäden (chordæ tendinæ) des Herzens. B. Rössle.
72 Jerking Respiration. Henssen.—Ueber saccadirtes Athmen.
73 Ueber ein Myxom des Herzens (heart). Eichhorst.
74 Pleuritis im Verlauf von (in course of) Typhus abdominalis. Pfeiffer.

69. **Injurious Action of Salicylic Medication on Urinary Passages.**—Lüthje has been investigating the condition of the urinary apparatus after the ordinary therapeutic administration of the salicylates. He found that in every case without exception there were evidences of a desquamative irritation in the kidneys and urinary passages, and the bladder was also seen to be inflamed. The conditions did not return to normal until after an interval of two or three weeks. The urine invariably contained tube casts and cylindroids. There can be no question of an idiosyncrasy on account of the large number of patients examined (33), and the results of experimental tests. He therefore warns that the salicylates should never be given for more than three or four days and the daily dose not exceed 5 gm. even in acute articular rheumatism.

Deutsche Med. Wochenscrift, Berlin and Leipsic.

75 (XXVIII, No. 49.) Ueber den Werth "functioneller" diagnostik. F. Kraus.
76 Extraction of Metabolic Products in Bodies of Bacteria. E. Levy and F. Pfersdorff.—Ueber die Gewinnung der schwer zugänglichen in der Leibessubstanz enthaltenen Stoffwechselprodukte der Bakterien.
77 Delirium Tremens, etc. G. Feldmann.—Ueber 71 Anfälle von acuter Geistesstörung der Trinker (bei 50 Personen).
78 Gekreuzte Adduktoren-Reflexe bei Syringomyelie und Neuritis. L. Huismans.
79 Casuistischer Beitrag zur Genese der Gummata syphilitica. G. Kulisch.
80 *Suffocation from Ascarides in Throat. M. Wagner.—Fall von Erstickung in Folge von Verlegung des Kehlkopfeinganges durch Spulwürmer.
81 L. Landois. Nekrolog.
82 Meat Preservatives. E. Harnack.—Einige Betrachtungen über Fleischpräservesalze.
83 Nicolicin. C. T. Mörner.

80. **Suffocation from Ascarides.**—The case was remarkable in that the child, a boy of 8, was under constant supervision in a hospital on account of scarlet fever. He had been given santonin and evacuated and vomited numbers of worms. A large clump was found after death in the entrance to the esophagus. A small amount of air could be breathed so that the intense dyspnea did not prove fatal until after two hours had elapsed.

Mittheilungen a. d. Grenzgebieten, Jena.

84 (X, No. 5.) *Tetanus chronicus. J. A. Grober.
85 Ueber Perityphlitis acuta. L. Moszkowicz.
86 Beiträge zur Localisation und Verbreitungsweise der eitrigen (mode of spreading of suppurative) Peritonitis. L. Rauenbusch.
87 *Casuistisches und Experimentelles zur Cholangitis calculosa. L. v. Mieczkowski.
88 Tetanus nach subcutaner Gelatine-Injection. Eigenbrodt.
89 *Weitere Mitteilungen über die Resultate der Diphtherie-Behandlung, mit bes. Berücksichtigung der Serum-Therapie. A. Wettstein.
90 Successful Extirpation of Tumor in Spinal Cord. S. E. Henschen and K. G. Lennander.—Rückenmarkstumor mit Erfolg exstirpiert.
91 *Ueber Ulcus ventriculi traumaticum. A. Gross.
92 *Ueber Syphilis viscerális und deren Manifestationen in Form von chir. Erkrankungen. N. Trinkler.
93 Perimysitis crepitans. L. Brauer.

84. **Chronic Tetanus.**—Grober has had occasion to observe a case of chronic tetanus similar to the three reported by De Brun from his practice at Damascus. The tetanic contractures persisted in the latter for three and four months and five years. Mastication and deglutition could be performed only with difficulty. Grober's patient was a lad of 12, who apparently recovered from a typical attack of traumatic tetanus under treatment with salicylate, narcotics and sweats. A month later the former symptoms recurred with no evidences of fresh infection and tonic spasms developed in arms and thighs. Various mus-

cles became chronically contracted, with risus sardonicus, the teeth rigidly set with a space of .5 cm. between them. Internal organs apparently sound. When first seen by Grober, nine months after the first symptoms, this condition still persisted. The upper part of the trunk is most affected, the shoulders drawn together, the patient unable to sit or turn over in bed. No antitoxin treatment was instituted as Grober assumed that the primary infection had induced a gradually extending myositis fibrosa, substituting the contractile tissue. No improvement has been noted in the two years since, except that the patient is less emaciated, and the arms are more easily moved. An attempt is now to be made with orthopedic apparatus.

87. **Cholangitis Calculosa.**—Mieczkowski reports that a patient at Mikulicz's clinic discharged 2300 c.c. of bile in twenty-four hours through the fistula left after a cholecystectomy on account of lithiasis. The urine diminished in quantity meanwhile to such an extent that uremia was indicated by the vomiting. The fistula soon healed.

89. **Serotherapy of Diphtheria.**—Wettstein states that the mortality from diphtheria at the Zürich clinic has been less by two-thirds during the last five years than previously. At the same time the mortality throughout the province has been scarcely one-half less, probably owing to the fact that antitoxin is not so readily procurable outside of the cities.

91. **Traumatic Gastric Ulcer.**—The experiments and four cases described by Gross indicate that a contusion affecting the stomach may be the starting point for an ulcer. But it does not develop unless the healing tendency in the subject is defective. Hyperacidity, of course, favors its development. The stomach may be injured while the abdominal wall and other organs are intact.

92. **Syphilis of the Viscera.**—The viscera are affected in about the same proportion in hereditary as in acquired syphilis. A syphilitic process in the stomach is in many points identical with that of a round ulcer. Its diagnosis is still a weak point. Bobrow's case has demonstrated the value of appropriate surgical treatment of syphilitic affections of the stomach too advanced to yield to mercurial treatment. Thirteen operations on the liver are on record, including the one described. The three deaths occurred in persons of 40 and over. In several cases the tumor was not resected when its syphilitic nature was discovered on operation. In others a gummatous tumor too large for spontaneous absorption was resected, or a lobe of the liver, which had become, as it were, "tied off." In one case a severe diarrhea which had persisted for eighteen months was cured in a week by mercurial treatment after its syphilitic nature was surmised. Trinkler has observed only 12 cases of syphilitic diarrhea in his practice. He is inclined to operate in case of syphilis visceralis as soon as mercurial treatment proves ineffectual. He has found that ascites may accompany gumma in the liver and be absent in case of cancer of the organ.

Muenchener Med. Wochenscrift.

94 (XL, No. 49.) Ueber das Verhalten der Leucocyten bei Appendicitis. Coste.
95 *Operative Correction of Extreme Curvature of Legs. M. Reiner (Lorenz's Clinic).—Ueber ein Operationsverfahren zur Beseitigung hochgradiger Unterschenkelverkrümmungen.
96 *Experimenteller Beitrag zur Behandlung der Perforationen und Zerreissungen der Gallenblase (lacerations of gall-bladder). L. Baldassari and A. Gardini (Ferrara).
97 Experimentelles über Adrenalin. Lehmann.
98 Meat Preservatives. R. Boehm.—Zur Beurteilung der Borsäure und des Borax als Fleischkonservierungsmittel.
99 (No. 50.) Ueber ein bequemes (convenient) Object zum Studium der Mastzellen (Clasmatocyten). L. Schreiber.
100 Mesotan, ein äusserlich anzuwendendes Salicyl Präparate (for external use). H. Röder.
101 Beiträge zur Mechanik des Hörens (hearing). G. Zimmermann.
102 New Method of Warming Carbonated Mineral Waters. K. Vanselow.—Die neue Erwärmungsart der kohlensauren Soolbäder im Kissingen.
103 Diagnostic Significance of Leucocyte Count. A. Kühn.—Zur diagnostischen Bedeutung der Leucocytenwerte bei Typhus abdominalis und bei chirurg. Eiterungen. (Commenced in No. 49.)
104 Official Vaccination Report. L. Stumpf.—Bericht über die Ergebnisse der Schutzpockenimpfung im Bayern im Jahre 1901. (Commenced in No. 48.)

95. **Correction of Extreme Curvature of the Legs.**—Reiner incises the soft parts down to the bone and then cuts the bone nearly across at the deepest point of the concavity or inner angle. He then applies manual extension and later the extension screw. The results are surprisingly excellent in several cases he illustrates. In one each leg was shaped almost like a Z below the calf. He cuts the Achilles tendon if too resistant.

96. **Treatment of Perforation and Lacerations in Gall Bladder.**—Baldassari reports successful experimental results from the application to the defect of a flap cut from the abdominal wall near the incision. Such a flap contains a layer of serosa and also a layer of striped muscle which is turned toward the interior of the gall bladder. When the dogs were killed later the gall bladder showed merely a very slight depression at the spot. In the more recent cases the transplanted flap was moderately stained with bile. By using a flap of this kind the surgeon will be able to operate on the gall bladder with greater assurance, not hesitating to excise a part that is firmly fastened by adhesions or degenerated, knowing that the defect left can be easily remedied.

Wiener Klin. Wochenschrift.

105 (XV, No. 42.) Significance of Rhodan Reaction in Saliva in Ear Affections. G. Alexander.—Zur Frage der Verwerthbarkeit der Rhodanreaction bei Ohrerkrankungen.
106 Erfahrungen über die Janet'sche Methode der Urethral- und Blasen- (bladder) Behandlung.
107 Zur Casuistik der metastatischen Carcinome des Gehirns (brain), nebst Bemerkungen zu dem Symptom der Perseveration. R. Barany.
108 (No. 43.) *Ueber congenitales Myxoedem und infantiles Myxoedem. F. Pineles.
109 Ueber die sogenannten scarlatiniformen Serum-Exantheme bei Diphtherie. K. Leiner.
110 Zur Etiologie des Dünndarm- (small intestine) Volvulus. L. Kirchmayr.
111 (No. 44.) Ueber erbliche Belastung (hereditary burdens). Wagner v. Jauregg.
112 *Zur Symptomatologie des stenokardischen Anfalles (angina pectoris). R. Kaufmann and W. Pauli.
113 *Zur Klinik der Angiosklerose der Darmarterien (Dispragia intermittens angiosklerotica intestinalis). N. Ortner.
114 Address on Assuming the Chair of Dermatology. G. Riehl.—Antrittsvorlesung bei Ubernahme der Lehrkanzel für Dermatologie und Syphilis an der k. k. Universität in Wien.
115 (No. 45.) Study of Behavior of Peritoneum. P. Clairmont and H. Haberer.—Ueber das Verhalten des gesunden und veränderten tierischen Peritoneums.
116 Zur Frage der Immunisierung gegen Eiweiss (albumin). F. Hamburger.
117 Periurethale Infiltrate und Abszesse beim Weibe (in woman); chronisch gonorrhoische Induration der weiblichen Urethra. R. Matzenauer.
118 (No. 45.) Zur Klinik der durch atmosphärische und technische Elektrizität verursachten Gesundheitsstörungen (disturbances of health). S. Jellinek.
119 Zur Pathologie der grossen Hirngefässe (cerebral vessels). O. Marburg.
120 Noch einmal der Meningokokkus intracellularis. H. Albrecht and A. Ghon.
121 Ueber das Verhalten der Leucocyten bei Eiterungen (suppurations). M. Blassberg.
122 Beitrag zum Vorkommen der "punktirten Erythrozyten." K. Reitter.
123 Gleichzeitige (simultaneous) Gravidität beider (of both) Tuben. K. Kristinus.
124 (No. 48.) Struma tuberculosa. P. Clairmont.
125 Beiträge zur cystoscopischen Diagnostik. J. Halban.
126 Differenzierung der Diphtherie-Bacillen von den Pseudodiphtherie-Bacillen durch Agglutination. J. Schwoner.
127 Zur Lösung der Variola-Varizellen-Frage (question). N. Swoboda. (Commenced in No. 47.)
128 (No. 49.) Beiträge zur Lungen-Chirurgie. E. Rochelt.
129 Zur Kenntniss der Paratyphus-Bacillosen. R. Schmidt.
130 Ueber Hemmungserscheinungen (phenomena of inhibition) bei frischen immun-Sera. R. Volk and H. de Waele.
131 (No. 50.) Wahre Hypertrophie des Gehirns (brain) mit Befunden an Thymus-Drüse und Nebennieren (suprarenals). G. Anton.
132 Zur radiographischen Diagnose der Nierensteine (kidney stones). R. Kienböck.
133 Ueber osteoplastisches Carcinom. E. Comisso.

108. **Congenital and Infantile Myxedema and Endemic Cretinism.**—Pineles regards these conditions as three distinct entities. The first is liable to occur anywhere; the second is mostly confined to Great Britain and Belgium. These both affect the female sex mostly, while endemic cretinism shows a slight excess of the male sex. The first displays symptoms during the second half of the first year of life or later, while the second does not become manifest until after the sixth year, and cretinism is evident in the earliest childhood. The congenital variety is generally severe and causes marked disturbance in the growth, while the infantile variety is usually mild; cretinism may be either mild or severe. The thyroid gland in congenital myxedema is defectively developed, while in the infantile form there is atrophy of the gland, and in

cretinism there is strumous degeneration and occasionally atrophy. The etiology of congenital myxedema includes chronic alcoholism, tuberculosis or neuropathologic heredity and sometimes consanguinity. That of the infantile form includes the factors which determine idiopathic myxedema in adults. Endemic cretinism is due to some unknown infectious injurious influence. The so-called sporadic cretinism belongs in the group of congenital myxedema.

112. **Symptomatology of Angina Pectoris.**—Kaufmann has witnessed a number of cases in which the pains were more or less limited to the epigastrium and would have been diagnosed as a stomach affection by the inexperienced, notwithstanding the absence of nausea and vomiting. The success of treatment addressed to the assumed angina pectoris confirmed the true diagnosis. He explains the pains as the subjective perception of colic of the vessels emanating from arteriosclerotic lesions of the vessel wall, with which secondary radiating pains may be associated. As the bile duct or ureter contracts with a painful cramp above the point where a calculus is irritating its walls, the arteries are similarly liable to cramps of the same nature when lesions of an arteriosclerotic vessel become irritated by over-distension, increased pressure or vigorous vasodilation. As digitalis increases the blood pressure it only adds to the pains in such cases. Morphin arrests the attack by diminishing the sensibility of the point that is being irritated. Diuretin, on the other hand—like atropin in case of spastic contraction of the intestine—exerts an inhibiting, soothing action on the spastic contraction of the vessels and is the sovereign remedy in these cases. The gastric pains are distinguished by being brought on by physical exertion, change of position, etc., with no direct connection with eating; also by the localization of the pains and the influence of medication addressed to the circulation. The attack recurred in one patient whenever he lay down.

113. **Intermittent Angiosclerotic Dyspragia of the Intestines.**—Ortner reports a case of what he describes as a hitherto unobserved form of angiosclerosis of the intestinal arteries. The symptoms and cause were similar to those of intermittent claudication, as established by the autopsy. He therefore applies to the syndrome observed the term intermittent claudication, or the more general expression which can apply to all the organs, intermittent angiosclerotic dyspragia (painful functioning). It may be paretic, spastic or painful. The case described was of the paretic form. The attacks occurred two or three hours after a hearty meal and lasted for two or three hours. The patient, a man of 55, suffered from burning pains in the abdomen, shortness of breath and distension of the right lower part of the abdomen, with obstinate constipation. After two months all the symptoms ceased for a year, then recurred for a week every four months for a year or two, when the attacks became progressively worse and he succumbed to peritonitis. The autopsy disclosed severe sclerosis of the intestinal arteries.

Gazzetta degli Ospedali, Milan.

134 (XXII, 129.) Identità della tubercolosi bovina ed umana. A. Cipollina.
135 Nota sull'inizio delle febbri estivoautunnali. G. Perrod.
136 Carcinoma e malaria. F. Orta.
137 *Un caso di sutura del cuore (heart) e del polmone (lung). D. Pomara.
138 (No. 132.) Angina intermittente? G. B. Gasparini.
139 In qual modo va intesa la specificità dei sieri precipitanti? M. Ascoli.
140 *Effect on Digestion of Experimental Transplantation of Pancreatic Duct. L. L. Ardizzone.—Sul trapianto del dotto di Wirsung.
141 La terapia elettro-magnetica. V. Maragliano.
142 Mecanismo di azione (action) dell' antipirina. G. Ferrarini.
143 *Sulla cura chirurgica del cancro dell'utero. L. M. Bossi.
144 *Sul potere disinfettante della calce viva (quicklime) riguardo agli sputi tubercolari. I Boni.
145 (No. 134.) Report of Italian Congress of Internal Med. See Nos. 129, 131.
146 (No. 135.) Le coree dai moderni punti di vista (views of chorea). S. Mircoli.
147 *Blood Cells in Cases of Heart Defects. R. C. Regolo.—Le cellule dei vizi cardiaci.
148 L'alessina (alexin) nell'inanizione sperimentale. M. Collina.
149 Contributo alla chirurgia dei tumori sacro-coccigei. T. Pozzan.
150 Per la genesi del lipoma. D. Della Rovere.
151 *Snail Broth as Culture Medium. D. R. Domenico.—Nuovi mezzi di coltura ricavati dall' helix pomatia.
152 *Successful Experimental Hypodermoclysis of Hydrogen Dioxid in Case of Asphyxia. G. Campanella.—La ipodermoclisi di acqua ossigenata nelle asfissia.
153 Di un nuovo trapano (trephine) par la formazione di un lembo osteo-periosteo-cutaneo. O. Cantelli.
154 (No. 138.) Sul siero neurotossico. G. Boeri.
155 Casuistico di neurofibromi multipli. P. L. Pellegrino.
156 Sulla presenza dell' anchilostoma nei pellagrosi. G. Binetti.

137. **Case of Suture of Heart and Lungs.**—Pomara's patient was too severely wounded for survival to be possible, but the prompt suture of the wound postponed the fatal termination for a few days. His incision and the resulting flaps differed from those hitherto in vogue, as the incision was in the shape of a reversed T, the base line 12 cm. and the perpendicular 6 cm. in length.

140. **Transplantation of Pancreatic Duct.**—Ardizzone transplanted the duct in dogs to a distance of about 50 cm. from its normal orifice in the small intestine. The specific gravity and amount of urine diminished, the feces increased in quantity and the proportions of nitrogen, fats, ash and organic substances. The animals showed marked oligemia when killed after long observation.

143. **Surgery of Uterine Cancer.**—Bossi thinks experience is demonstrating that irritation from any slight cause may transform a simple solution of continuity into a malignant growth. He therefore advises a plastic operation to cover such a lesion and states that in 1,000 patients with various lesions of the uterus, treated by curettement and a plastic operation on the cervix, not a single case of cancer has occurred. On the other hand, 21 cases of cancer have developed in 1,000 patients with similar uterine affections, treated by curettement alone, without a plastic operation. He hopes that the prophylaxis of cancer will be one of the questions on the order of the day at the next international congress of gynecology.

144. **Lime as Sputum Disinfectant.**—In Boni's tests lime in chunks did not disinfect the sputa even on long contact. Pulverized lime had an attenuating effect on the Koch bacillus, in the course of several days, but still some of the guinea-pigs succumbed who had been inoculated with the sputa after eleven days of contact. The pneumococci and other bacteria were rapidly destroyed by the lime.

147. **Blood Cells in Cardiac Defects.**—Regolo has been investigating a number of patients with various affections in regard to the presence of cardiac cells (Herzfehlerzellen). He found them frequently in cases of congestive affections of the broncho-pulmonary apparatus, even with the heart intact. They were constant in cardiac affections and were important for the diagnosis when masked by a respiratory affection. They were most numerous in case of a mitral defect.

151. **Snail Broth as Culture Medium.**—Mollusks contain the largest proportion of glycogen in their muscles, and consequently are peculiarly adapted for a culture medium.

152. **Subcutaneous Injections of Hydrogen Dioxid.**—Campanella reports a single experiment on a rabbit who was restored to health after profound asphyxia by the subcutaneous injection of a total of 50 c.c. of a solution of hydrogen dioxid. The control animal died in a few minutes. No inconveniences or disturbances of any kind were noted. He thinks that hypodermoclysis has the advantages without the disadvantages of the endovenous route for the life-saving administration of oxygen in severe cases of asphyxiation, bronchial cramps, emphysema, loss of compensation in cardiac affections and in what is called local asphyxia of the extremities.

Roussky Vratch, St. Petersburg.

157 (I, No. 33.) K role pneumokokka v klinitcheskoi patologii conjunctivy tchelovyeka (in man). T. T. Rymovitch.
158 Construction of Nose Out of Finger. N. M. Volkovitch.—Obrazovanie nosa iz paltza.
159 Successful Sterilization of Catgut with Dry Heat. M. P. Krivoshein.—K. voprosu o sterilizatzii ketguta sukhim zharom.
160 Etiology of Endemic Anthracoid Ulcer. K. Y. Shulgin.—K voprosu ob etiologii Penjdinskoi yazvy.
161 (No. 34.) "Blennorrhea of the Lachrymal Sac" in Neonatorum. G. A. Rabinovitch.—O t. naz. blenorrheye myeshka u novorozhdennykh.
162 Sudan III for Staining Fat and Fatty Degeneration of the Formed Elements in Fluids and Semifluid Media. Y. B. Lewinson.—Okraska sudanom III.
163 Paraffin Prothesis. O. K. Aue.

164 Experimental Data in Regard to Importance of Trauma in Localization of Tuberculosis in the Joints. N. N. Petroff.—Experim. dannya po voprosu bogortchatkye sustavov v svyazi s povrezhdeniyami.

New Patents.

Patents of interest to physicians, December 16, 23 and 30:

715748. Making acetic acid. Paul Boessneck, Glauchau, Germany.
716221. Hernial truss. Francis J. Hage, Sr., Goldsboro, N. C.
716040. Applicator. Wm. C. Holt, Oakley, Kan.
716240. Syringe. Thomas L. Jones, Kansas City, Mo.
716265. Blister plaster. Elbert W. McAllister, South Bend, Ind.
716304. Fountain syringe. James H. Stearns, Brooklyn.
716329. Antiseptic protector for telephone mouthpieces. Robert I. Willmarth, San Francisco.
36172. Design, hot water bag or similar article. Victor C. Van't Woud, Brooklyn.
716526. Syringe bulb. Richard H. Eddy, Providence, R. I.
716426. Syringe. Alcinous B. Jamison, New York.
716448. Movement cure apparatus. Gerald J. Macaura, Hartford, Conn.
716756. Surgeon's operating table. Timothy B. Powers, New York.
716474. Apparatus for manufacturing and dispensing carbonated beverages. Orrin J. Price, Detroit.
716789. Manufacturing chlorates. Richard Threlfall, Birmingham, Eng.
717072. Magnetotherapeutic apparatus. John Burry, Brooklyn.
717085. Casein compound. Henry V. Dunham, New York.
716878. Making caffein. Benjamin R. Faunce, Philadelphia.
717407. Ear-massage apparatus. Miller R. Hutchinson, Upper Montclair, N. J.
717436. Inhaler. Stephen A. Morse, Oklahoma, O. T.
716931. Nasal irrigator. Charles H. Pattison, Chicago.
717448. Sterilizing apparatus. R. R. Pease and P. J. Tucker, Hartford, Conn.
717474. Atomizer. George S. Tolman, Winthrop, and G. K. Jones, Somerville, Mass.

The Public Service.

Army Changes.

Movements of officers of the Medical Department, U. S. A., under orders from the Adjutant-General's Office, Washington, D. C., from Dec. 22 to Dec. 26, 1902:

Adair, Geo. F., contract surgeon, U. S. A., is relieved from further duty in the Division of the Philippines, and will report in person to the commanding general, Department of the East, for assignment to duty.

Anderson, Robert A., contract surgeon, U. S. A., is granted leave of absence for two months, to take effect about Jan. 1, 1903.

Brownlee, Chas. Y., first lieut. and asst.-surgeon, U. S. A., is granted leave of absence for twenty days.

Dale, Frederick A., first lieut. and asst.-surgeon, U. S. A., is granted leave of absence for ten days.

Edwards, James F., first lieut. and asst.-surgeon, U. S. A., is relieved from further duty in the Division of the Philippines, and on the expiration of his present leave will proceed to Ft. Leavenworth, Kan., for duty at that post.

Powell, Dwight C., contract surgeon, U. S. A., will proceed to Ft. Barrancas, Fla., and report to the commanding officer of that post for duty to relieve Captain Thomas J. Kirkpatrick, asst.-surgeon, U. S. A., who will proceed to San Francisco, and report to the commanding general, Department of California, for assignment to duty with troops en route to the Philippines.

Reynolds, Charles R., first lieut. and asst.-surgeon, U. S. A., now at San Francisco, will proceed to Ft. Washington, Md., for duty, relieving First Lieut. Frederick F. Russell, asst.-surgeon, U. S. A., who will proceed to Ft. Wingate, N. M., and report to the commanding officer of that post for duty.

Thorp, Chas. W., contract surgeon, U. S. A., will proceed to Ft. Grant, Ariz., to relieve Captain Charles E. B. Flagg, who will proceed to San Francisco, for assignment to duty with troops en route to the Philippines.

Van Poole, Gideon McD., first lieut. and asst.-surgeon, U. S. A., is granted ten days' extension of leave.

The following named officers, now at San Francisco, will proceed to their respective homes to await their honorable discharge from the service of the U. S., Feb. 1, 1903: Captains Robert E. Caldwell, Joseph L. Sanford, Percival S. Rossiter, Elmer S. Tenney, Wm. R. McPherson and Francis J. Pursell, asst.-surgeons, U. S. V.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ended Jan. 3, 1903:

Asst.-Surgeon J. M. Brister, detached from the *Frolic* and ordered to the *El Cano*.

Asst.-Surgeon U. R. Webb, detached from the *Iris* and ordered to the Naval Station, Cavite, P. I.

Asst.-Surgeon H. A. Dunn, detached from the *Vicksburg* and ordered to the *Frolic*.

P. A. Surgeon C. A. Crawford, detached from recruiting duty and ordered home to wait orders.

P. A. Surgeon G. L. Angeny, detached from the *Lancaster* and ordered to the *Essex*.

Asst.-Surgeon R. W. Plummer, detached from the Naval Hospital, Chelsea, Mass., and ordered to duty at Chattanooga, Tenn.

Asst.-Surgeon G. F. Freeman, detached from the *Essex* and ordered to duty at Naval Hospital, Chelsea, Mass.

Asst.-Surgeon W. H. Ulsh, Dec. 22, 1902, retired from active service, by reason of disabilities incurred in the line of duty.

P. A. Surgeon H. C. Curl, ordered to the Naval Hospital, Mare Island, Cal., for treatment.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service, for the seven days ended Jan. 1, 1903:

Surgeon Preston H. Bailhache, leave of absence for seven days on account of sickness, under Paragraph 179 of the regulations.

P. A. Surgeon H. S. Mathewson, granted leave of absence for seven days from Dec. 2, 1902.

P. A. Surgeon S. B. Grubbs, detailed to represent the service at meeting of the American Public Health Association at New Orleans, Dec. 8-12; to proceed to Ensenada, Cal., for special temporary duty, Dec. 12, 1902; to proceed to Mazatlan, Mex., for special temporary duty, Dec. 30, 1902.

Asst.-Surgeon W. A. Korn, granted leave of absence for seven days from Dec. 25, 1902, under Paragraph 181 of the regulations.

Asst-Surgeon J. W. Schereschewsky, to proceed to Charleston, S. C., and assume temporary command of the service during the absence, on sick leave, of A. A. Surgeon F. F. Sams.

Asst.-Surgeon H. McG. Robertson, relieved from duty at Chicago, and directed to proceed to New York (Stapleton), and report to medical officer in command for duty and assignment of quarters.

BOARDS CONVENED.

Board convened at Washington, D. C., Dec. 26, 1902, for the physical examination of Chief Engineer Howison, R. C. S. Detail for the Board: Assistant Surgeon-General H. D. Geddings, chairman; Asst.-Surgeon B. S. Warren, recorder.

Board convened at Washington, D. C., Dec. 27, 1902, for the physical examination of Chief Engineer Maher, R. C. S. Detail for the Board: Assistant Surgeon-General H. D. Geddings, chairman; Asst.-Surgeon B. S. Warren, recorder.

PROMOTIONS.

John Achenbach and E. S. Maguire, to be pharmacists of the first class.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Jan. 3, 1903:

SMALLPOX—UNITED STATES.

California: San Francisco, Dec. 14-21, 7 cases.
Colorado: Denver, Dec. 6-20, 11 cases.
Illinois: Chicago, Dec. 20-27, 3 cases.
Indiana: Dec. 20-27, Evansville, 1 case; Indianapolis, 37 cases, 4 deaths; Kokomo, 1 case; South Bend, 1 case.
Kentucky: Lexington, Dec. 20-27, 1 case.
Maine: Portland, Dec. 20-27, 1 death.
Massachusetts: Dec. 20-27, Boston, 13 cases, 6 deaths; Somerville, 1 case.
Michigan: Detroit, Dec. 13-27, 93 cases, 1 death; Grand Rapids, Dec. 20-27, 8 cases.
Mississippi: Natchez, Dec. 23, 10 cases.
Missouri: St. Louis, Dec. 14-21, 26 cases.
Nebraska: Omaha, Dec. 20-27, 9 cases.
New Hampshire: Dec. 20-27, Manchester, 7 cases; Nashua, 8 cases.
New Jersey: Camden, Dec. 20-27, 1 case; Jersey City, Dec. 21-28, 1 case.
New York: Binghamton, Dec. 20-27, 1 case; Buffalo, Dec. 13-20, 2 cases.
Ohio: Cincinnati, Dec. 19-26, 15 cases; Cleveland, Dec. 20-27, 7 cases, 4 deaths; Toledo, Dec. 6-27, 24 cases, 2 deaths; Warren, Dec. 6-27, 5 cases, 1 death.
Pennsylvania: Altoona, Dec. 20-27, 1 case; Erie, Dec. 20-27, 3 cases; Philadelphia, Dec. 20-27, 25 cases, 3 deaths; Pittsburg, Dec. 20-27, 23 cases, 3 deaths; Warren, borough and county, Dec. 10-17, 5 cases.
South Carolina: Charleston, Dec. 13-27, 4 cases.
South Dakota: Sioux Falls, Dec. 20-27, 1 case.
Tennessee: Memphis, Dec. 20-27, 4 cases.
Utah: Salt Lake City, Dec. 11-27, 20 cases.
Washington: Tacoma, Dec. 15-21, 3 deaths.
Wisconsin: Green Bay, Dec. 21-28, 1 case; Milwaukee, Dec. 20-27, 5 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Nov. 29-Dec. 6, 24 cases.
Belgium: Brussels, Nov. 29-Dec. 6, 1 death; Ghent, Nov. 22-29, 3 deaths.
Canada: Winnipeg, Dec. 13-20, 1 case.
Great Britain: Leeds, Dec. 6-13, 6 cases, 1 death; Liverpool, Dec. 6-13, 34 cases, 1 death; Manchester, Nov. 29-Dec. 6, 3 cases; Sheffield, Nov. 29-Dec. 6, 5 cases.
India: Bombay, Nov. 25-Dec. 2, 2 deaths; Karachi, Nov. 23-30, 1 case.
Italy: Palermo, Nov. 29-Dec. 6, 6 cases, 2 deaths.
Malta: Nov. 23-30, 1 case.
Mexico: City of Mexico, Dec. 7-14, 2 cases, 3 deaths.
Russia: Moscow, Nov. 22-29, 2 deaths; Odessa, Nov. 29-Dec. 6, 5 cases; St. Petersburg, Nov. 29-Dec. 6, 13 cases, 2 deaths.
Straits Settlements: Singapore, Nov. 1-13, 5 deaths.

YELLOW FEVER.

Colombia: Panama, Dec. 8-22, 9 cases, 2 deaths.
Ecuador: Guayaquil, Dec. 6-13, 10 deaths.
Mexico: Vera Cruz, Dec. 13-20, 14 cases, 3 deaths.

PLAGUE.

India: Bombay, Nov. 25-Dec. 2, 120 deaths; Calcutta, Nov. 22-29, 12 deaths; Karachi, Nov. 22-30, 11 cases, 10 deaths; Madras, Nov. 22-28, 1 death.

CHOLERA.

India: Calcutta, Nov. 22-29, 42 deaths.
Japan: Osaka and Hiogo, Nov. 8-23, 3 cases, 2 deaths.
Straits Settlements: Singapore, Nov. 1-15, 22 deaths.